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45 S. DUKE ST.,
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AMERICAN JOURNAL

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MEDICAL SCIENCES.

VOL. I.

[illegible]

PHILADELPHIA:

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R. M. BOLENIUS, M. D
46 S. QUEEN ST.,
LANCASTER, PA.

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

VOL. I.

SECOND EDITION.

PHILADELPHIA:
CAREY, LEA AND CAREY—CHESNUT STREET.

1828.

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ADVERTISEMENT.

IN the August number of the Philadelphia Journal of the Medical and Physical Sciences, it was announced that a new series would be commenced on the first of the ensuing November—and accordingly the Publishers have now the pleasure of presenting to the public the first number of the American Journal of the Medical Sciences.

The design of the work is strictly national. To ensure the proper execution of this design, the Editors have endeavoured to obtain the co-operation of the most distinguished medical men throughout the Union, and in evidence of their success, they appeal with confidence to the list of collaborators, which however contains the names of only a portion of those who have associated themselves in support of the work.

It is believed that a journal established upon so broad and liberal a foundation, will possess many advantages—that it may eminently advance the interests and character of the profession—be beneficial in promoting an interchange of views, and the results of experience, among the great body of American practitioners—and that it will be received as authority, and have a wide circulation, both abroad and at home. The ample means at the disposal of the Editors, will enable them always to select such articles as the exigencies of medical information may seem to require or as may be most interesting, from their novelty or importance.

Arrangements have been made to import regularly from London and Paris every new medical work, and to obtain in exchange almost every medical journal published in Europe. These will be placed in competent hands for analysis or review, and whatever is valuable in their contents shall be laid before our readers as early as possible.

To enable the Editors to concentrate so great a variety of interesting information, it will be perceived that the size of the work is considerably enlarged.

In respectfully inviting contributions from every part of the Union, the publishers refer to the engagements on that head entered into in the prospectus, and now repeat the assurance, that all articles that may be inserted will be liberally paid for.

TO READERS AND CORRESPONDENTS.

We have received from Dr. J. Moore, of Scrogy, Miss. some interesting cases, evincing the efficacy of the Volatile Alkali in the Bites of Venomous Snakes; we had intended to insert the communication in the present number, but could not prepare in time some observations which we wish should accompany it—it shall appear in our next.

Drs. Ives and Pendleton's papers also in our next. We regret that the late period at which arrangements were made, has rendered it impossible for our distant collaborators to furnish their quota of materials in time for the present number.

We have received a charge delivered to the Graduates of a Medical School, and have read it with much gratification; it contains good advice, and sound ethical precepts, and we should be much pleased to see it in print, but it would be inconsistent with the plan of this Journal to give it an insertion.

Our Review of Des Brus is unavoidably postponed till our next.

A friend, during a recent visit to Europe, has negociated for us, exchanges with the principal Italian and German Journals—these have been forwarded, and we expect to receive them shortly. We are indebted to the same friend for the loan of several Italian Journals; in our Periscope will be found every thing interesting, that they contain.

We are happy to announce that Drs. Leo Wolf and Mæhring, two talented German physicians, who now reside here, and who are in correspondence with the most distinguished medical men in Germany, will co-operate with us in furnishing notices of every thing new and interesting in medicine that may be published in that country. We are indebted to these gentlemen for many new German Medical books, several of which we have noticed in this number, and will make use of others hereafter.

We have received the following publications:—

Journal des Progrès des Sciences et Institutions Médicales en Europe, en Amerique, &c. Vol. III. (in exchange.)

Journal Universel des Sciences Médicales, Juin, (in exchange.)

Annales de la Médecine Physiologique. Par F. J. V. Broussais. Janvier, Février, Mars, Avril, Mai, Juin, Juillet, 1827, (in exchange.)

The London Medical and Physical Journal, edited by Roderick Macleod, M. D. for July, August, and September, 1827, (in exchange.)

The Edinburgh Medical and Surgical Journal, July, 1827, (in exchange.)

The London Medical Repository and Review, July, August, and September, 1827, (in exchange.)

Gazette of Health, edited by Richard Reece, January to July, 1827—seven numbers, (from the editor.)

The Medico-Chirurgical Review, edited by James Johnson, M. D. July, 1827, (in exchange.)

Medical Statistics; or a comparative view of the mortality in New York, Philadelphia, Baltimore, and Boston, for a series of years, &c. By N. Niles, Junr. M. D. and J. D. Russ, M. D. (from the editors.)

The Western Medical and Physical Journal, Original and Eclectic. Edited by Daniel Drake, M. D. and Guy W. Wright, M. D. June, July, and August, 1827, (in exchange.)

Biblioteca Italiana, 1825-6. Milan, (twenty-four numbers.)

Opuscoli Scientifici. Bologna, (forty-two numbers.)

Dublin Hospital Reports, Vol. IV.

Bulletin des Sciences Medicales, May, 1827, (in exchange.)

Revue Encyclopedique, Juin et Juillet, 1827, (in exchange.)

Lectures on the Operative Surgery of the Eye. By G. I. GUTHRIE, second edition, London, 1827.

Malaria: an Essay on the Production and Propagation of this Poison, and on the Nature and Localities of the places in which it is produced. By JOHN MACCULLOCH, M. D., F. R. S., &c. London, 1827, pp. 480.

A Treatise on the Nature and Cure of Rheumatism, with Observations on Rheumatic Neuralgia and on Spasmodic Neuralgia, or Tic Doloreux. By CHARLES SCUDAMORE, M. D., F. R. S., London, 1827, pp. 589.

Manual of Pathology. By L. MARTINET, D. M. P. Translated by JONES QUAIN, A. B., London, 1826, pp. 310.

Reports of the Medical Society of the City of New York on Nostrums or Secret Remedies, Part I. Published by order of the Society, under the direction of the Committee on Quack Remedies. New York, 1827, pp. 52, (from the Society.)

Reply to the "Additional Strictures," contained in the first number of the Quarterly Medical Review, on the Principles of Dental Surgery, &c. By LEONARD KOECKER, M. D. Surgeon Dentist, &c. London, 1827, (from the author.)

Magazin der ausländischen Literatur der gesammten Heilkunde, und Arbeiten der Aertzlichen-Vereins zu Hamburg; herausgegeben von Dr. G. H. GERSON und Dr. NIKOL HEINRICH JULIUS. May and June, 1827, (in exchange.)

Notizen aus dem Gebiete der natur und Heilkunde gesammelt und mitgetheilt. Von LUDWIG, Fr. von FRORIEP, 1826, (in exchange.)

North American Medical and Surgical Journal, for October, 1827, (in exchange.)

Nuovo Giornali di Literati et Scienze, Pisa, (in exchange.)

The Eclectic and General Dispensatory: comprehending a system of pharmacy, materia medica, the formulæ of the London, Edinburgh, and Dublin Pharmacopœias, prescriptions of many eminent physicians, and receipts for the most common empyrical medicines; collated from the best authorities. By an American Physician. Philadelphia, Towar and Hogan, 1827, pp. 627, 7 plates, (from the publishers.)

Authors of new medical books, desirous of having them reviewed or noticed in this Journal at the earliest opportunity, are invited to transmit us a copy as soon after publication as convenient, when they will receive prompt attention. Under ordinary circumstances, very considerable delay is caused by the circuitous routes through which they reach us.

Papers intended for publication, should be sent as early after the appearance of the Journal as possible, in order to be in time for the ensuing number. Such communications should be addressed to "CAREY, LEA and CAREY, Philadelphia, for the editors of the American Journal of the Medical Sciences." All letters on the *business* of the Journal to be addressed exclusively to the publishers.

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An ordinance to preserve the Health of the City of Baltimore, and for the due performance of Quarantine at the Port of Baltimore, 24th March, 1826.

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1. Lectures on the Operative Surgery of the Eye; or, an Historical and Critical Inquiry into the Methods recommended for the cure of Cataract, for the Formation of an Artificial Pupil, &c. &c. &c. containing a new method of Operating for Cataract by extraction, which obviates all the difficulties and dangers hitherto attendant upon that operation: being the substance of that part of the author's Course of Lectures on the Principles and Practice of Surgery, which relates to the operations on that organ. By G. I. Guthrie, Esq. Second edition, with seven Explanatory Plates. London, 1827, pp. 554 - - - - - - 182

2. Neue Nuverlässige Heil-art der Lustseuche in allen ihren Formen; bekannt gemacht, von Karl Heinrich Dzondi, Professor an der Universität zu Halle, mit zwei Tafeln in Steindruck. Halle, 1826, 8vo. pp. 120 185

3. Manual of Pathology, containing the Symptoms, Diagnosis, and Morbid Characters of Diseases: together with an Exposition of the different methods of Examination applicable to Affections of the Head, Chest, and Abdomen. By L. Martinet, D. M. P. Resident Physician of the Hotel Dieu. Translated, with notes and additions, by Jones Quain, A B. Demonstrator of Anatomy at the Medical School, Aldersgate-street, London, 1826, pp. 310 - - - - - - - - - 188

4. Chirurgische Kupfertafeln, eine auserlesene Sammlung der noethigsten Abbildungen von äusserlich sichtbaren Krankheitsformen: u. s. f. Zum gebrauch für praktische Chirurgen. Von L. F. V. Froriep, M. D. &c. 4to. Weimar - - - - - - - - - - - - *ib.*

5. Lehrbuch der gerichtlichen Medicin. Zum Behuf akademischer Vorlesungen; und zum Gebrauch für gerichtliche Aerzte und Rechtsgelehrte entworfen. Von Adolph Henke, M. D. &c. Berlin, 8vo. pp. 471. 1827 - - - - - - - - - - - - 189

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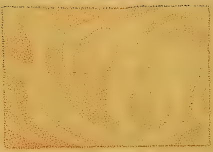

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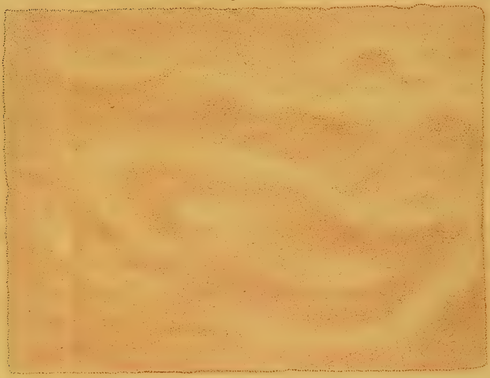

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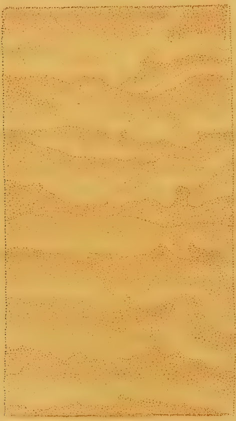

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THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

ART. I. *Inquiries into the Healthy and Diseased Appearances of the Mucous Membrane of the Stomach and Intestines.* By W. E. HORNER, M. D. Adjunct Professor of Anatomy in the University of Pennsylvania.

THE want of some standard, whereby the healthy and diseased appearances of the stomach and bowels may be distinguished, has been felt, perhaps, by all who have engaged in researches into the pathology of these organs. Though much has been written on the subject, yet the vagueness of the language used by authors, and more especially the great inaccuracy with which they employ the terms representing colours, have opened one of the most extensive fields for disputation, in pathology.

In the numerous post mortem examinations which I have made, both for myself, and my professional friends, I have frequently found that the most opposite conclusions have been drawn from identical appearances in the organs under consideration; and there existed no available experience or authority, by which the correctness of these conclusions could be tested, and the truth determined. These circumstances induced me to institute a series of observations on the gastro-intestinal mucous membrane, and by coincidences entirely accidental, I have been so fortunate as to obtain in a few months a description of information, that in the ordinary current of events might not have been acquired in years.

Three unsettled points present themselves in this inquiry:—1st. What is the healthy condition and appearance of the gastro-intestinal mucous membrane? 2d. What is its appearance in congestion from the agonies of dying? 3d. What is its appearance in genuine red inflammation?

It is necessary in the commencement of this discussion, to set-

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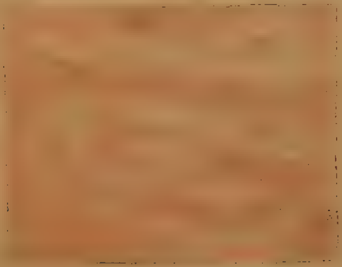

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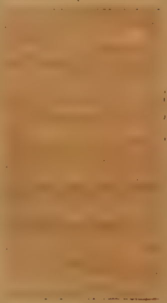

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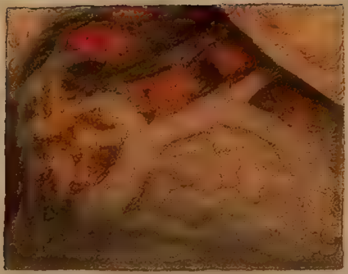

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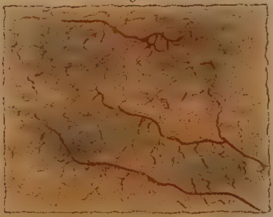

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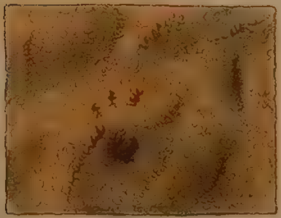

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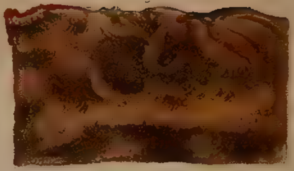

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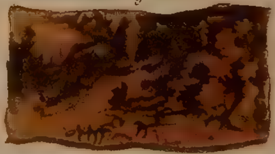

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1 Cardiac end of stomach	Exp. 5 pa. 12
2 Pyloric do. do.	
3 Healthy stomach	Ob. 2 pa. 13
4 do. Jejunum	
5 Inferior middle portion of stomach	Ob. 4 pa. 28
6 Cardiac end of stomach	Ob. 5 pa. 30
7 Cardiac portion of stomach	Ob. 7 pa. 33
8 Mucous surface of colon	
9 Peritoneal surface of small intestine	

Drawn from Nature & Engraved by J. Drayton

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

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Three unsettled points present themselves in this inquiry:—1st. What is the healthy condition and appearance of the gastro-intestinal mucous membrane? 2d. What is its appearance in congestion from the agonies of dying? 3d. What is its appearance in genuine red inflammation?

It is necessary in the commencement of this discussion, to settle the signification of the terms used; this I shall do, not in an arbitrary manner, but according to the meaning attached to them in conversation by some of the most sagacious and intelligent physicians of our city. I am forced to depend upon the inferences of conversation, because the definitions of our dictionaries do not decide; indeed the terms are there used promiscuously. Thus for example, PARR, says that congestion is a swelling that gradually arises and slowly ripens, in opposition to that defluxion which is quickly formed, and terminated. In the Dictionnaire des Sciences Medicales, congestion is defined to be a humoral collection which is formed slowly in some part of the body, increases gradually, and finishes by an intumescence of a variable size; the fluids which form it may be blood, serosity, pus, fat, bile, urine, in one word, any of the fluids belonging to the body. It is thus evident that Parr alludes to the sub-inflammation of modern pathology, and that the other has no specific meaning. I now therefore state that by Congestion, I mean an accumulation of red blood in any part or organ of the body, without irritation or mechanical violence; and by Red Inflammation, the accumulation of red blood which follows any local irritation.

I. *Of the Natural Colour of Mucous Membranes.*

When an animal is bled to death the stomach being empty, the mucous membrane of the latter, and of the intestines, is of a yellowish pearl colour, presenting at a short distance the lightest possible tint of pink; and few or no marks of blood exist, even in the large vessels under the peritoneal coat.

Experiment 1*st.* *April*, 1827.—At a butchery in Spring Garden, a sheep, which had fasted for twenty-four hours, was slaughtered in the usual way, by cutting the throat, and immediately afterwards dividing the spinal marrow in front between the occiput and first vertebra. As soon as life was extinguished we examined the abdomen. The internal membrane of the stomach was of a pearl colour, slightly yellow, approaching to what artists call a light tint of bright brown, and the intestines were almost exactly like the stomach. Neither stomach nor intestines exhibited their blood-vessels, even of the largest size, except very faintly, and there were no red patches in either.

Experiment 2*d.*—Was a repetition of the first experiment, and was followed by precisely similar results.*

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* These two experiments, or rather observations, were executed by Dr. La Roche and myself in commencement of a joint series, from which, much to my regret, his departure for Europe withdrew him at this point of our inquiry.

If an amimal be killed with a full stomach by puncture of the medulla spinalis at its commencement, the mucous coat of the stomach will retain on the surface where the food was in contact with it, a light lake, approaching vermilion, from the detention of blood in its capillary system. The following experiments proved this:—

Experiment 3d, June, 1827, at the University.—A full grown female rabbit of the white kind was fed upon green cabbage leaves. In about three hours afterwards she was killed by pithing with a saddler's awl between the occiput and the first vertebra. Immediately upon the introduction of the instrument, the body was seized with a spasm, the extremities were drawn together and convulsed; the animal gaped two or three times, but there was no inspiration. In five minutes after pithing, the abdomen was opened; the circulation was found by pressure upon the veins to be going on but languidly in the parietes of the abdomen and in the abdominal viscera. I waited five minutes more, when it seemed to be completely stopped.

I then cut out the stomach, laid it open along its great curvature and washed away with a stream of water its contents, which presented the appearance of having been well boiled and bruised. The food would have measured probably about an ounce, and was principally in the left half of the stomach: there was no hour-glass contraction of the latter. The mucous coat of the left half of the stomach was of a uniform light lake, approaching vermilion, without blotches or shades of difference, and firm; but the mucous coat of the right half was almost destitute of vessels or injection, and had the dull pearl colour of the stomachs of the sheep bled to death. The mucous coat of the small intestines was the same colour as the stomach, but much lighter.

The vermicular motion continued for ten or fifteen minutes in the intestines, after the abdomen was opened. I observed that the same occurred in the horns and body of the uterus, quite as clearly as in the intestines, and that it could be produced at pleasure by puncture, by clipping, and by stirring. On the uterus being slit open from one end to the other, it flattened itself out, and the internal surface corrugated precisely as in the small intestine. The capillary system of the liver bled freely half an hour after death, upon being punctured with the scissors.

Experiment 4th.—A full grown female rabbit—Opened the abdomen, by a cut from sternum to pubes—intestines became very highly injected with blood, in a few minutes after being exposed.—Laid open the colon and irritated the internal coat by rubbing—it took on a bright scarlet lake colour, approaching to vermilion;—on the external face of the same intestine, an anastomosis was manifested resembling a very fine honey-comb. The stomach was laid open by a section along its greater curvature and the bouillie like contents consisting of green vegetable matter turned out. The internal coat of the stomach highly suffused with blood, and of a deep crimson lake colour. The stomach bled very profusely from the cut surface, in consequence of which, it began to clear up, by its colour becoming less intense. Applied some alcoholic solution of corrosive sublimate upon one spot of the internal coat of the stomach, about ten minutes after the commencement of the experiment—it did not seem to produce any impression, perhaps owing to the hæmorrhage. Killed the animal in twenty-five minutes after commencement, by pithing it behind occiput; then cut out the stomach. The cardiac half was of a light tint of lake colour; the pyloric half was of a yellow pearl colour. The stomach after death, in this experiment, corresponded with experiment No. 3, in the colour being uniform, not mottled. The peristaltic movements were observed in the uterus and its cornua. After pithing, gasping occurred, with the usual cessation of respiration.

Experiment 5th.—A full grown rabbit. Punctured medulla spinalis, at commencement, respiration stopped immediately. In five minutes opened abdomen, capillary circulation as well as that in the larger vessels, brisk. In twenty minutes capillaries of liver, spleen, and kidneys bled on being punctured with a saddler's awl—stomach and bowels did not. Cut the stomach open along its greater curvature and turned out its contents, then removed and washed it well immediately. The left half of a lake, approaching vermilion, uniformly diffused as in experiments 3d and 4th, (see Pl. I. fig. 1,) the right half of a dull pearl, as in the same experiments. See fig. 2.

From the great number of blood-vessels distributed through mucous membranes, they are, during life, of a very bright red colour, on many of the viscera, as the stomach, the small intestines, the lower end of the large, on the vagina and nose; in many other parts they are much less vascular, as in the lining membrane of the sinuses of the nose, in the bladder, and in the excretory ducts generally. The nostril and the vagina, in a robust, healthy person, will probably be found to represent correctly the shade of colour which, in life, belongs naturally to the gastro-intestinal mucous coat.

Observation 1st. Living colour of healthy Mucous Coat of Colon.—There is now a female in the Surgical Ward of the Philadelphia Alms-House, who suffered some time ago from prolapsus ani, which is said to have protruded about six inches: the protruded intestine sloughed off, as well as the sphincter ani and the adjoining integuments. This new state of the parts affords a distinct view of the internal coat of the colon, near the sigmoid flexure. The perineum has cicatrized and united to the end of the colon, but the surface is kept excoriated, by the continued excrementitious discharges; from the want of a sphincter. In this patient, the mucous coat is of the colour of the vagina, or of a recently blistered surface of the true skin.

Observation 2d. Sudden death from ossification of coronary arteries, exhibiting natural colour of Gastro-intestinal Mucous Membrane.—July 17, 1827. Mr. W. J. aged fifty-five, of remarkably temperate, regular habits; for some years previous to his death, was troubled with a shortness of breathing, upon ascending a flight of stairs. His principal treatment was regularity and abstemiousness. Last night about 10 o'clock, just before he went to bed, he took, as was not unusual, a glass of cream, which he always considered to agree remarkably well with him. About 4 o'clock A. M. he was seized with extreme difficulty of breathing, complained of most violent pain in his loins, said that he was dying, and in a short time expired. From the commencement to its termination, this attack occupied twenty minutes, during which his senses remained unimpaired. Dr. Edward Jenner Coxe was present, he found his pulse regular but small.

At 4 o'clock this afternoon I examined him, assisted by Drs. Dewees and Coxe.

Exterior appearance.—Stature five feet seven inches, square, robust and well set, middle corpulence inclining to obesity. Skin clear and fresh; features placid; some blueness about the neck from settling of blood, lips pale; pupils middling size; no putrefaction; subcutaneous veins bled on being cut.

Thorax.—Lungs perfectly healthy in their parenchyma; soft, elastic; on being cut into discharged a great deal of frothy mucus and serum. Right lung adhering in its whole periphery by old adhesions of coagulable lymph. The left pleura contained five ounces of straw coloured serum, no remains of coagulable lymph to be seen about it; perhaps there might have been more serum which was removed by absorption after death, an idea advanced by Mascagni; injection of pleura not considerable, but I could not judge very satisfactorily on this point, from the difficulty of throwing the light in a proper manner upon it.

Heart larger than usual by one-third, covered with fat; only a few drops of synovia in pericardium. Right side healthy and filled with fluid blood, having no coagula in it; left side contained only a small quantity of fluid blood; left auricle healthy; moderate hypertrophy of the left ventricle. Semilunar valves undergoing the earthy degeneration so common in advanced life, with very small ossified points here and there; aorta had also undergone as far as the arteria innominata the degeneration preceding ossification. Sinuses of Valsalva twice or thrice as large as natural. Mitral valves somewhat degenerated also.

Coronary arteries of the heart for two inches after their origin, and also the branches leading from them, ossified into rigid inelastic tubes, like the arteries of the extremities in certain cases.

Cartilages of ribs perfectly ossified.

Abdomen.—Liver healthy. Spleen, coats of, interspersed with white patches giving it a parti-coloured look; healthy in other respects.

Stomach middle sized; contained two ounces of mucus, some of which was loose, while the other formed a white transparent coat adhering to the sides, but which could be scraped off easily. Rugæ of mucous coat elevated, but not unusually so; whole internal surface of mucous coat on the summits and sides of rugæ of a very light, warm sienna or bright brown colour, which was produced by innumerable microscopical points of red blood remaining in the capillaries. In the depressions between the rugæ, the stomach of a dull pearl colour.

The jejunum was of a deeper sienna, and of a more uniform tinge than the stomach; contained feculent matter consisting of mucus, yellow bile, and cream, all reduced to a homogeneous and digested mass. Its lacteals were distended with chyle, and were seen converging in their ramifications to the mesenteric trunks which were also filled. The lacteals were not perceptible in the ileum.

The colon presented its mucous coat of a dull pearl colour, and contained soft healthy fæces adhering to its sides.

Peritoneum entirely and unexceptionably healthy. Brain not examined, as there had been no symptoms of apoplexy or cerebral disease.

I never on any occasion of my life found the abdominal viscera in a state which seemed indicative of more perfect health, or more suitable as a standard of observation; the case I consider in this respect as invaluable. See Pl. I. fig. 3 and 4.

We have now ascertained the colour of a healthy gastro-intestinal mucous coat, in death from hæmorrhage after fasting; in death from puncture of medulla spinalis with a full stomach; in sudden death without the least probability of a diseased digestive apparatus, the stomach being empty; and finally in the living state. We shall next endeavour to ascertain the colour in Congestion.

II. *Colour of Mucous Membranes from Congestion.*

Our materials for elucidating the laws and phenomena of passive congestion, are exceedingly imperfect and scanty. According to one writer,* congestion is the effect of torpor of habit, connected with an abstraction of stimulus, and is for the most part local. It is seldom accompanied with febrile irritation till it acts as an extraneous stimulus. Febrile motions may sometimes be the product of congestions; congestions, depositions, or evacuations are uniformly the product of febrile motions, that is, of irregular action. Dr. Armstrong has also written, indeed diffusely, on what he calls the congestive typhus fever, (p. 68—97;) but the cases which he has given in illustration of his views, would seem rather to belong to diseases of irritation, than to passive congestion of the organs affected. He has also made some capital omissions in not giving us the laws of congestion; in not saying a word about the state of the mucous coat of the stomach and bowels; and in confining his attention almost exclusively to the liver, spleen and brain.

The congestion of red blood in any part of the body, is commonly produced by an obstruction of one or more of the large venous trunks which return the blood to the heart. A ligature on the arm for the purpose of bleeding has this effect; garters worn too tightly, or indeed any other articles of dress which interfere with the return of blood produce the same; lymphatic or aneurismal tumours situated near the junction of the extremities with the trunk of the body, also produce a congestion of blood in the parts beyond them, by pressing on the adjoining veins. Position will do the same, as throwing the head downwards and forwards in certain individuals who are corpulent and have short necks. Permitting a column of blood to remain too long on a part, sometimes has this effect, as in standing or walking, which in certain persons is followed by a great accumulation of blood in the legs and feet. The general character, however, of all these cases of congestion is, that the congestion disappears the moment that the cause that produced it, is removed. It very rarely happens that the capillaries and the larger veins are more than simply distended under such circumstances, and they quickly contract to their healthy diameters. It however occurs occasionally in pregnant women, near the term, to have some of the fine blood-vessels of the legs ruptured, in which case there follows an extravasation of blood in small bluish spots about half an inch in diameter, and which being a true ecchymosis, presents the same variations of colour, and is removed by the same process as the latter when caused by bleeding.

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* Jackson on Fever, 1803, p. 197.

It is practicable to produce a congestion of the whole venous system, by obstructing the general circulation. If such obstruction be continued till the death of the individual, the phenomena of congestion are exhibited in swollen face, bulging eyes, blue lips, tumefied and red tongue, with purplish or red blotches on various parts of the surface of the body, but especially about the head, neck, and trunk. The most usual causes of such obstructions to the general circulation, are asphyxia, from hanging, drowning, or irrespirable gases. The mucous membrane of the lungs wanting in this case the usual stimulus of atmospheric air, refuses passage to the blood from the ramifications of the pulmonary artery into those of the veins, and a complete arrest is thus put upon the general circulation. The lung becomes the seat of a congestion or engorgement in its capillary system, and all the mucous membranes of the body suffer in the same way.

BICHAT'S experiments,* are quite conclusive on this point. He says that in an animal in whose trachea a stop-cock has been fixed, if you draw out a portion of intestine and split it open, then close the stop-cock; in four or five minutes afterwards, a dark brown colour will succeed to the red, which previously characterised the mucous surface of the gut; and the same change of colour will occur in a granulating surface under similar circumstances.

The lividity of the surface of the body, and of its mucous membranes, may be made to come and go at pleasure, by interrupting or restoring the freedom of respiration. The arrest of the capillary circulation is, however, not to be considered as a mechanical phenomenon, but a physiological one; for the animalization of the blood being somewhat affected or altered from the want of respiration, the sensibility of the capillary system is not properly excited by it, and therefore this system refuses to propel the blood. The blood in this respect may be compared to extraneous fluids, which, if they be injected into living blood-vessels are found not to run so minutely as they do some time after death, when the vessels get into a passive state.† Parallel phenomena are common, and are well exhibited in the actions and sensibilities of many parts of the body. For example, the trachea, which is so large, yet closes immediately against the introduction of fluids which are unfit for respiration, as proved by GOODWIN'S experiments. The urethra in a state of sexual excitement will transmit the semen, but not the urine; the lacteals readily absorb the nutritious part of the chyle, but refuse the remainder, notwithstanding the equal fluidity of both. A moment's reflection will satisfy us that such powers of discrimination are indispensable to the operations of the system, for without them, the several fine tubes of the human body, vascular, absorbent, and secretory, would be continually mixing their fluids in a manner inconsistent with life and its objects.

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* Anat. Gen. Vol. I. p. 188.

† Bichat, Anat. Gen. Vol. II. p. 25.

It is not improbable that several species of purpura, as the urticans, the senilis, and the hæmorrhagica, all of which seem to be an arrest of the red blood in patches in the true skin, or rete mucosum, have in their pathology a close connexion with the purple spots from asphyxia—that is to say, that there is a want of reciprocal sympathy between the red blood, and the capillaries of the part, and therefore it is arrested in its passage through the latter. These spots may be distinguished from a common ecchymosis, by their boundaries being well defined, and also by their deep, varying colour, which being sometimes lighter, and sometimes darker alternately, show that the blood forming them, though arrested, is yet under the influence of animalization. The colour alternating is, however, not an invariable feature of this disease. I have lately met with a case of purpura hæmorrhagica at the Alms-House following an inflammation in the cellular substance on the front of the knee, and extending over the anterior semi-diameter of the leg from the knee to the foot, where there were no alternations of colour, and the disease disappeared like a common ecchymosis. I have subsequently seen it a prelude to mortification in the leg of a patient, Anthony Hartman, aged 25, in the same institution. The patch which it formed, surrounded almost the whole leg about its middle, in a band of five or six inches.

In the more common cases of congestion, as the accumulation of blood is removed immediately upon the cause being withdrawn; so the organ of the body, which has been the seat of it, is quickly restored to its usual functions, and the disturbance which they have experienced, readily disappears. If, however, the congestion be permitted to remain an undue length of time, the preponderance of the fluids will cause the congested part to inflame and even to mortify, as in strangulated hernia.

The following dissection of a patient, who died in the Alms-House, will serve to illustrate the state of the stomach and bowels in congestion from a slow process of asphyxia, and to fill up partially the very wide gap in this part of physiology and pathology.

Observation 3d. Congestion of Gastro-intestinal Mucous Coat.—Wm. Thomson, æt. 37, admitted June 8th, 1827, with abscess around cricoid cartilage, died June 10th.

Previous History.—While in France, some years since, had secondary syphilis and other constitutional affections,—was salivated for a length of time—recovered—came to this country; where he has continued since in the capacity of coachman. Has drank freely for some time past. About four months since, had common catarrh, the result of which was some difficulty in deglutition and respiration, and tremor in the throat.

Symptoms.—When admitted, there was a flattened, immoveable tumour in front of the thyroid cartilage, about two inches in diameter, half an inch thick—inspiration difficult in the extreme, amounting almost to suffocation—expectoration purulent—deglutition exceedingly painful—countenance anxious and distorted.

The tumour was removed by the knife on the day of admission, at four o'clock, P. M. I found it lying on the whole front part of the thyroid cartilage, between it and the sterno-hyoid muscles. The wound was filled with lint, and then covered with a compress of the same, maintained by a roller: in ten or fifteen minutes afterwards, it began to bleed rather freely. I then removed the dressings, turned the clot of blood out of it, sponged, and not finding any bleeding vessel, I directed it to be left undressed, with a light cloth thrown over it. This answered to arrest the bleeding until midnight, when it again bled half a pint and then stopped. The tumour was of the hard encephaloid kind, having, however, a small purulent softening in front; it seemed as if it might have come from a lymphatic gland; but its flattened shape was adverse to this idea: neither had it a distinct capsule.

He spent the night but slightly relieved by the operation, pulse rather full, and tense—expectoration and deglutition less painful and difficult—the former thick, white, purulent and consistent—Ordered venesection ℥viij. ℞. Tart. Ant. gr. ii—Aq. pura, ℥viij. M. A table-spoonful every hour—took six doses, then stopped on account of nausea.

June 9th.—Respiration very laborious—expectoration as yesterday—will not consent to tracheotomy, which I now proposed to him. On the next day, died at ten o'clock, A. M.

Autopsy, six hours after death. An entire removal of the tumour over the thyroid cartilage—its bed thickly covered with coagulating lymph—thyroid gland healthy—superior laryngeal nerves not affected—No marks of capillary congestion, on the surface of the body—Lungs healthy in structure, some old pleuritic adhesions on left side—no particular congestion, save at their posterior part, perhaps less blood than natural found on cutting into them—miliary deposites of coagulating lymph on the surface of both lungs.

In pericardium about ʒiij. of straw coloured fluid.

Abdomen.—System of vena portarum, filled with blood; even in the fine intestinal branches, which were very conspicuous under peritoneum, so as to give a light purple colour to the whole of the small intestinal canal: in places it was interspersed with mahogany coloured patches of two inches diameter. Colon externally was of a white pearl colour, contracted to three-eighths of an inch in diameter, and contained natural, hard fæces. There were no fæces in small intestines, only flatus.

Along the whole anterior margin of the liver, a little above its edge, there was a white, hard cicatrix of old, condensed coagulating lymph; mixed at intervals with hepatic structure, by penetrating at various places from three to six lines into it. This terminated near the right end of the great lobe, by a depression, as if an abscess had once existed there. On cutting into the liver, near the cicatrix, many small miliary tubercles were found there, but they were not observed at more remote places.

Gall-bladder filled with healthy bile.

Spleen healthy, but completely surrounded by old adhesions.

Stomach, common size; of a pearl colour on peritoneal surface. Internal or mucous coat, covered with mucus tinged with bile—corrugated—light pink colour, generally—summit of rugæ, from accumulation in capillaries, appeared like red streaks, at the distance of six feet, from being covered with minute dots of red of the size of a needle point. No large patches of ecchymosis or red blotches, so conspicuous in inflammation.

Intestines. Mucous coat covered with similar small dots or points of red. Internal membrane of colon, slightly tinged with red dots. Besides the hardened fæces in the commencement of this viscus, there were some small pieces of it along its course.

Œsophagus natural; internal coat white pearl colour, and the venous ramuscules filled with blood, but the dots not conspicuous.

Throat. Along the upper margin of the glottis, as formed by the doubling of the membrane from the tip of the arytenoid to the side of epiglottis cartilage a tumour existed on each side, formed of serum and coagulable lymph, about the size of a small nutmeg, so loose as to hang over the glottis, and to be drawn over the rima glottidis in every act of inspiration.

Cricoid cartilage, at posterior part both externally and internally, separated from its perichondrium; whose surface was in the condition of a fistulous sore.

Aryteno-cricoid articulation, detached by the extension of the latter disease. A sinus formed communicating between the fistula and the right ventricle of the larynx. Posterior part of cricoid cartilage reduced to a thin edge above—its diseased surface, rough and resembling a carious bone—lining membrane of trachea and bronchia, natural.

Head.—Scull-cap bled freely when torn up. Veins of dura mater and pia mater much congested. Tunica arachnoidea, raised up from pia mater, by serous effusions in the interstices between convolutions.

Mass of cerebrum, congested with blood.

Ventricles contain ℥ss. serum. Serum, on basis of *brain*, under tunica arachnoidea: arteries of base, filled with blood. *Pons varolii*, congested. Fourth ventricle contained serous effusion. Texture of the cerebrum and cerebellum, natural.

To sum up what has been said, it appears then—

1st. That congestion is not an active condition of the part affected. When active it constitutes inflammation.

2d. That congestion most frequently is the result of mechanical impediments to the venous circulation.

3d. That the other cases in which it occurs, are where there is a want of reciprocal sympathy between the blood and the blood-vessels in the capillary system, in consequence of which, the latter refuses passage to the red blood.

III. *Of the Red Inflammation of Mucous Membranes.*

Red inflammation has for its symptoms, heat, pain, redness, and swelling, all of which are very obvious when it attacks a portion of the external surface of the body. It differs from congestion, in the latter causing an accumulation of blood in all the capillaries of an organ in which the blood is arrested, while inflammation is most frequently limited to a single tissue, and exhibits redness in it alone, or at least, principally; as for example, in mucous coats during their inflammation, in muscular during theirs, in peritoneal during theirs, &c. This however must depend upon the intensity of the inflammation, for where it is very considerable, adjacent coats will also be affected.

Congestion is regular in its progress, and begins without constitutional symptoms; whereas, inflammation begins with a chill, has exacerbations and remissions, and a course of augmentation, of stasis and of decline. They both may terminate by delitescence or a disappearance of the accumulated blood, or by resolution when particles of red blood are infiltrated, but inflammation also terminates in suppuration, in scirrhus, in hepatization, and softening of a part.

The traces of acute inflammation are in many cases very fugitive, and entirely disappear upon death, because the local irritation which attracted the blood and accumulated it, having ceased, the blood abandons that part and retires towards the centre of the circulation. We can seldom tell by the appearances twenty-four hours after death, the quantity of blood which has penetrated an inflamed membrane, as the peritoneum, the pleura, the cellular and mucous membranes, the skin, &c. The eruption of measles, and the redness of sore throat disappear on the death of the patient. We are not, however, to infer from these circumstances, that the mere afflux of blood to a part constitutes inflammation, on the contrary it is attended with a dilated condition of the vessels independent of this afflux, for if death occur during the height of measles, the eruptions may be made to reappear by injecting the vessels.

Bichat* has very properly observed, that in inflammation we should distinguish between acute and chronic affections, because, though the blood readily vanishes from the former, yet it will remain in the latter, because it has combined with the diseased organ. Hence, induration, suppuration, and vitiated secretions are satisfactory signs of inflammation of a part.

The increased irritability of a part is the cause of its inflammation, and of the afflux of fluids to it. Frequently this increased irritability depends upon the sudden diminution of irritability in other parts of the body, by depressing applications. Thus, cold suddenly applied to the surface by depressing the irritability there, causes an accumulation of it with inflammation of some one of the internal organs, as the lungs or bowels. Direct undue stimulation of an organ or part, will produce an augmentation of it irritability amounting to inflammation. The natural increase of irritability of organs at particular periods of life, sometimes amounts to inflammation, as that of the uterus at puberty manifested by menorrhagia, amenorrhœa, &c. the extreme tenderness of the breast at the beginning of lactation—the tenderness of the testicles during a state of sexual excitement, &c.

It is principally in the capillary system,† that the phenomena of inflammation occur, and that the varying degrees of organic sensibility determine corresponding movements in the circulating fluids, accumulating them at one spot, and expelling them from another. Inflammation is therefore exactly the inverse of what Boerhaave believed, for, according to him, the blood pushed from behind by the heart into an organ caused its irritation or inflammation; whereas it is the irritation which attracts the blood.

Irritation has all the gradations from the light, alternating and varying blush of virgin diffidence to that rapid and tumultuous afflux of fluids to an organ which in a few hours produces its dissolution. In slight irritations there is no fever, but when they are more intense there is an increased heat of the body, and an accelerated circulation throughout it. Fever in such cases, is merely a general symptomatic affection, arising from the sympathy which connects the heart to all other parts, and has nothing of the specific affection in it, but merely manifests the grade of the irritation. Thus, a fever from a syphilitic bubo is the same as a fever from measles, from small-pox, or even from a mechanical injury.*

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* Anat. Gen. vol. 2. p. 22.

† Idem, p. 25.

When the irritation of a part goes beyond certain bounds, the sensibility is exhausted, and death ensues.† The vital condition having abandoned the solids, the fluids get quickly into a state of putrefaction, this state is the gangrene of writers, and is well depicted in strangulation of an intestine, or in mortifications which frequently occur in the legs of drunkards. Bichat‡ goes so far as to say, that when the organic sensibility of the part begins to diminish, the blood which has been attracted by the inflammation may even then tend to putrefaction, but always the want of tone in the solid precedes it.

There are many proofs of inflammation being seated in the capillary system, and of the circulation of the latter being in some measure independent of the general circulation. 1. The partial erythemas of the skin. 2. In slight incisions or scratches the skin will bleed very little at first, but so soon as the irritation has determined a flow of blood to the part, the hæmorrhage is sometimes troublesome, as in shaving. 3. The secondary bleeding from operations is sometimes very profuse from this cause. 4. Another, and a very strong proof of the power of the capillary circulation to go on without the impulsion from the heart, is that if a limb be made turgid with blood by the application of a tourniquet as in common amputation; when it is cut off, though it be completely withdrawn from the influence of the heart, yet the capillaries empty themselves, and the limb becomes as pallid as under any other circumstances of death. Though I feel satisfied of the capillary circulation being different from the circulation in larger vessels in not depending wholly on the heart, yet it is to be understood that I do not withdraw it entirely from this agency, for there are many strong proofs of its subordinancy. In the inflammation of transparent parts, for example, of the skin under the finger nail, where vascularity is very perceptible, every pulsation of the arteries of the upper extremity is attended for the moment by an increase in the vascularity of the part inflamed, and a deeper suffusion of it.

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* Bichat says, (An. Gen. v. 2. p. 30,) he believes that if one examined attentively local affections and general fevers, he would find invariably the species of fever to correspond with the species of local affection in its nature. I do not coincide in this sentiment.

† An. Gen. v. 2. p. 29.

‡ Ibid.

From the several observations now made, it is clear that the blood upon reaching the capillaries moves through them by their peculiar tone, and not exclusively by the action of the heart. But as many causes alter this tone or sensibility, causing it to increase or diminish, the motions of the blood in the capillaries will undergo corresponding varieties, and frequently become irregular. A slight irritation will cause it to advance, to recede, to turn to the right or to the left. By the experiments of HALLER, SPALLANZANI, and of others, often repeated and entirely well attested, it appears that the blood under ordinary circumstances moves straight forward from the arteries into the veins; but upon the application of an irritant, its movement becomes irregular, and inclines in every variety of direction, backwards as well as forwards. These movements of the globules of blood are very distinct in the transparent parts of animals having cold but red blood; they are seen with more difficulty in the warm-blooded, even in parts of the same transparency.* As Bichat remarks, it is hence easy to see that all the phenomena of inflammations, of eruptions, of tumours, &c. are founded especially upon this susceptibility of the blood in the capillary system, to be borne into an infinity of different directions, according to the places where it is called by the irritation.†

Fevers can only exist in animals who have a regular round of circulation, whose fluids move in mass. In zoophytes and animals whose circulation is entirely capillary, we only see such phenomena as belong to the capillary system, as tumours, adhesions, &c. Vegetables, for the same reason, have only the diseases of the capillary system.‡

The irregularities in the capillary circulation are always partial, for if the blood move more slowly or go backwards in one place, it will proceed more speedily in another, so as to maintain the general circulation; if it were otherwise, life must cease, for it would be incompatible with it for all the capillary circulation to be arrested, or to go backwards at once. Hence arises a law of organism always strongly exemplified in disease, that if the vital forces augment their energy at once place, they diminish it in another. There appears indeed to be only a certain quantity allotted to each individual, and though it may be accumulated at certain points so as to present a disproportionate sum in different parts of the body, yet it never can be augmented or diminished in mass by disease. This principle is the foundation of all correct physiology and pathology, and is in fact, a matter of daily observation We learn from this why it is that general bleeding is frequently inefficient in local inflammation, for so long as local irritation continues, whereby blood is attracted, (not driven,) to a part, the mass of blood may be diminished one quarter, and yet the inflammation will continue; whereas, in an animal having no irritated point in his system, you may double the quantity of blood by transfusion, and yet not produce local inflammation.*

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* Anat. Gen. v. 2. p. 39. † Ibid. ‡ Idem, 38.

Every operation of nature manifests an economical or exact application of means, to effect an object; there is nothing superfluous. We therefore see that during the waking state, the vital energies and the currents of blood, are principally directed towards the senses and organs of animal life, or those of relation, as the muscles, &c. and that during sleep, the vital energies are applied to molecular nutrition, and the repairs and general restoration of equilibrium in the system. Infants sleep more than adults for the reason that their molecular nutrition or growth is more imperiously required. Deprive any one of sleep, and he soon becomes haggard and emaciated. There is a continued alternation in each individual, in the actions of the system, and in the currents of blood, depending upon the waking, and upon the sleeping, states, one set of organs requiring the blood more at one time, and another set at another. It is impossible for an undue excitation, and an undue rush of blood to occur upon all points of the body at one and the same time, or in other words, for there to be a general disease. A general disease or inflammation would be as little consistent with nature, as a general rise in the waters of the ocean, which we know to be always lowered at one place when they are raised by the wind or other causes in another. Such an inference would be a solecism in pathology for the reason that disease implies a loss of equilibrium in the actions of the body, by one or more parts having an unnatural preponderance. The general actions of life may all be increased at the same time, as one increases the weights upon each end of a pair of scales, and yet preserves an equilibrium, but so soon as we take from one or add to the other, the equality is destroyed.

It is perhaps owing to molecular nutrition being stronger at night, that the symptoms of inflammation, (which latter at least in its milder forms bears some analogy to the former,) are increased at this time.

The general augmentation or acceleration of the actions of the body in exercise, as running, jumping, and so on, differs from disease in this respect, that there is no concentration of irritability in any one organ, and a consequent afflux of blood; but on the contrary, the equilibrium of the system is maintained, notwithstanding the apparent haste and momentum of its actions.

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* Anat. Gen. v. 2. p. 41.

The causes which produce inflammation of the mucous coat of the stomach and bowels are numerous, and in many individuals there is an idiosyncracy which inclines them to it, from very slight causes. Persons who are exposed to the changes of the atmosphere by sleeping out of doors, as in military life, present frequent examples of it; bad aliment, or an excessive indulgence in what is good, also disposes to it. Poisons of all kinds may produce it, also moral affections, as melancholy, rage, &c. As my principal object, however, is to point out the anatomical characters which are left after death by gastro-enteritis, I must confine myself to such remarks as are pertinent to them.

In acute inflammation of the mucous membrane of the stomach, when the patient dies in the early stage of the disease, the blood-vessels which ramify through the stomach, are enlarged and distended with blood. The membrane itself is covered by a coat of mucus, which is sometimes limpid like the white of an egg, but on other occasions, thick and purulent like that from the nose. The mucus adheres frequently very strongly to the stomach, and is now and then so tenacious and consistent from the admixture of coagulating lymph with it, as to resemble a false membrane. When the coat of mucus is scraped and washed away, the mucous membrane itself is brought into view, being most frequently in the greater part of its extent of a deep red, approaching on some occasions, a crimson red, on others, a purple or black. These colours are owing to the injection of a prodigious number of capillary vessels in the mucous coat; and in addition to them we find the inflamed part of the stomach interspersed with bands and patches of red, of the colour of coagulated blood, being a species of ecchymosis, in which the blood has escaped beneath, and in the substance of the mucous membrane. The mucous membrane at these places is somewhat softer than natural, and sometimes appears swollen, may be readily detached from the cellular coat with the end of a scalpel, and is in the condition of a bouillie. In cutting through all the coats of the stomach, and looking at the incised edge, it will be seen that where the general and diffused redness exists, the colour is only superficial; but at the ecchymosed spots, not only the whole thickness of the mucous coat is concerned, but even the corresponding part of the muscular, is more highly coloured than in common. In some cases where the gastritis has been occasioned by caustics, there are eschars of the mucous membrane, some of which are detached and leave the muscular, or even the peritoneal coat bare from the depth of the impression made. It is said that such eschars became more distinct some hours after the stomach has been exposed to the air.*

In some cases of acute inflammation where the symptoms have been those of army dysentery, or of typhus fever, the stomach and bowels are occasionally found a little thicker than usual, and of a yellowish brown or red colour on their peritoneal surface, and in their thickness; the fœtor from them on opening the abdomen, is much greater than usual, and the peculiar smell of the halitus from the peritoneum is overcome by it.

Some circumstances have been alluded to by Drs. PHYSICK and CATHRALL†, which, if properly appreciated, would contribute much to settle the opinions of medical men in relation to gastric inflammation; for they go to show that the appearance of the inflammation of yellow fever varies according to the date of the disease. "In two persons who died of this disease on the fifth day, the villous membrane of the stomach, especially about its smaller end, was found highly inflamed, and this inflammation extended through the pylorus into the duodenum some way." The inflammation was exactly similar to that produced by arsenic.

"In another person who died on the eighth day of the disease, several spots of extravasation were discovered between the membranes, particularly about the smaller end of the stomach, the inflammation of which had considerably abated. Pus was seen in the beginning of the duodenum, and the villous membrane at this part was thickened."

"In two other persons who died at a more advanced period of the disease, the stomach appeared spotted in many places with extravasations, and the inflammation disappeared." It and the intestines contained a black liquor so acrid as to produce inflammation and swelling on the operator's hands, which continued for some days.

"The stomach of those who died early in this disease was always contracted; but in those who died at a more advanced period, where extravasations appeared, it was distended with air." The external surface of the stomach was healthy, but from its veins being distended with blood they had a dark appearance.

In the dissections performed by Dr. Physick in the years 1798–99,‡ the inside of the stomach in some cases resembled the black vomit precisely in colour. In most of these cases no black matter was found in the cavity of the stomach, but the blackness depended upon this fluid being retained in the vessels of the inflamed mucous membrane. The doctor remarks that he never observed any putridity attending it, and that the colour was very distinguishable from the dark purple of gangrene. In some stomachs the blackness was universal; in others, in spots only; there being some spots in a state of high inflammation, and giving the inside of the stomach a chequered appearance. These spots, in one instance, resembled one another precisely in shape, and in all other respects, excepting colour, in which they differed, one being black and the other red.

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* Dict. des Sc. Med. T. 17.

† Rush's Inquiries, Vol. 3, p. 172. Philadelphia, 1809.

‡ Medical Repository, New York, Vol. 5, p. 129.

Dr. Physick's opinion on these subjects was, that this black matter, commonly called the black vomit from its being ejected by vomiting, was a secretion from the inflamed vessels of the stomach, and one of the most common modes by which violent inflammation of the stomach has a disposition to terminate. "For in some cases where the vomiting of black matter had been considerable in quantity, or continued for several days the inflammation was found very faint indeed; and in some the inside of the stomach appeared as if covered over with a vast number of small glands, like mucous follicles crowded together."*

When chronic inflammation has assailed the mucous coat of the stomach, this membrane is commonly found thrown into numerous folds. Sometimes it is thickened, of a denser texture than natural, and reddish, with irregular white patches. On other occasions, the whole of it is red with purple spots, as in acute gastritis; sometimes the whole of it is of a purple, approaching to claret colour. When the disease has been produced by poisons of a force insufficient to cause immediate death, small ulcers are found near the pylorus, and along the greater curvature of the stomach.†

In some observations that I have made on the stomachs of intemperate persons at the Alms-house, I have found the mucous coat thickened and dense, without any remarkable contraction of the stomach, yet thrown into numerous, thick, elevated rugæ, and the summits of those rugæ, so reddened by numerous capillary vessels injected with blood, that at the distance of a few feet they appeared, when the distinction of the individual capillaries was lost in the distance, like red streaks. This, which is probably one of the pathognomonic signs of a recent debauch in an old drunkard, is frequently mistaken in the post mortem examinations at the Alms-house, for congestion, from an arrest of blood in the agonies of dissolution.

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* Medical Repository, New York, Vol. 5, p. 129.

† Dict. des Sc. Med. T. 17, page 379.

The red blotches which form the leading anatomical character of acute mucous inflammation in malignant fevers may be readily produced by chemical irritants.

Experiment 6th.—A full grown white rabbit fed three hours before on cabbage leaf, was fixed in a frame, and the abdomen opened by a cut from the sternum to the pubes. The stomach was drawn out, it was filled with the food, (which exhibited the appearance of having been boiled,) and had an hour-glass contraction in its middle, separating it into two sacs with a small orifice between them. The stomach was opened all along its greater curvature, and the food turned out; the whole mucous coat was of a scarlet-lake colour. This colour became deep crimson-lake, and the stomach more suffused with blood on wiping or rubbing the mucous coat with the hand. To one part I applied the glass stopper of a bottle, wet with a saturated solution of corrosive sublimate in sp. vin. rect. which had the effect in three or four minutes of deepening the colour of that part still more.

The colon was in greater part filled with soft fæces. The small intestines on being cut into, exhibited the mucous coat of a light-lake, approaching vermilion, which colour remained after death.

In this experiment an ounce and a half of blood was lost from the cut vessels. I had proceeded to open the trachea, and had fixed a pipe into it for the purpose of trying the effect upon the blood, of shutting off the air from the lungs, when the animal died after a faint struggle.

In five minutes after, the stomach was cut out and put under a stream of water to wash it well. The lake colour still remained in the whole mucous coat from the residence of red blood in the capillary system. At the place where the corrosive sublimate was applied, *there were irregular, oblong, red blotches of two or three lines broad.* The mucous coat had indeed this variety of hue in other places also, but not so deep. In one part, there was a line of petechial spots, half an inch or three quarters in length, from half a line to a line in diameter, each resembling in colour the red blotches.

Observation 4th.—Acute gastritis and peritonitis. Harriet Derrickson, an African, aged twenty-six years, was received near the term of pregnancy into the Alms-house, July 13th, 1827, after a recent confinement in prison. On the preceding day she had got wet, which produced a pain in the right hypochondrium—she was relieved by immediate bleeding.

July 13*th.*—Her pulse was rapid and febrile, and skin rather above natural heat, but the symptoms were generally mild, and not alarming. She was ordered a dose of Epsom salts, and barley water for common drink.

July 14*th.*—Eye slightly sallow, tongue inclined to dryness, with dark fur at base, costiveness, skin of common temperature and moist, pulse rather tense and rapid. In the afternoon there was a violent pain over the whole head, which was rendered still more severe upon her stooping. Vertigo; thirst; loss of appetite; pains in the limbs. A dose of Seidlitz powders, and cold applications to her head were prescribed.

July 15*th.*—Tongue unchanged, thirsty still, skin hot, violent pain in the right side, eyes yellow, breathing hurried, pulse rapid, not strong. Treatment continued, with the addition of cups to the right hypochondrium.

July 16*th.*—She miscarried of a dead child to day at 6 A. M. with the loss of but very little blood, but her strength was almost exhausted. Her skin continued hot and dry, her tongue dry; stupidity. The symptoms continued to increase during the day; twenty leeches were applied to the temples, and forty to the epigastrium. At 4 P. M. a saline mixture which she had taken in the morning, brought away some natural evacuations, but the skin continued excessively hot, the pulse rapid, without tension, and compressible; the tongue still furred with red apex and edges, the sense of pain in the head had diminished much, but there was great tenderness of the epigastric and hypochondriac regions. A blister was applied to her side, sinapisms to her ankles, and fifteen drops of spirit of turpentine were directed every hour.

July 17*th.*—Almost entire insensibility, eyes of a golden colour, pulse very feeble, soreness of flesh, restlessness and moaning, spirit of turpentine increased in the afternoon to ʒij. every hour. She died at 6½ P. M.

This case was not treated by myself—the notes of it so far, were communicated by a most zealous and intelligent student of the house, Dr. Ashmead.

Autopsy, eighteen hours after death, by Drs. Hodge, Ashmead and myself. We found the internal face of the uterus lined with red blood, which had blended with its ragged surface; clots of blood were in the uterine orifices of the uterine veins, and could be readily picked out. There had been no undue hæmorrhage or lochial discharge.

The capillaries of the peritoneum, especially at the lower part of the abdomen, were distended with blood, and produced, here and there, rose-coloured patches. The peritoneal covering of the uterus seemed to have exceeded other parts in the intenseness of its disease, and had beneath it several patches of from six to twelve lines each of ecchymosed blood.

The stomach presented a degree of inflammation, over its whole mucous coat, not often surpassed even in yellow fever. Some inches square of its middle were almost in a state of sphacelation from the congestion and extravasation of red blood. Small clots of black blood were found among the contents of the stomach, but there was no black vomit. (See Pl. I. fig. 5.)

The following case, with the appropriate drawing, will serve to illustrate the appearance of the mucous membrane of the stomach, after an inflammation of two or three weeks.

Observation 5th.—Chronic Gastritis.—Women's Surgical Ward, Alms-house.—Mary M'Graw, aged 28, moderately corpulent, common stature, lymphatic temperament, habits of intemperance, was admitted May 10th, 1827, for a fracture of the neck of the acromion scapulæ, destruction of the acromio-clavicular articulation, and an extensive laceration and injury to the shoulder joint, manifested by the extreme facility with which it could be thrown out of place and restored again. The account she gave was, that two years ago she fell into a ditch, upon which occasion she produced the injury mentioned, and also broke the os humeri about the lower end of the bicipital groove. The os humeri was cured of its fracture, by the attention of a surgeon, but the shoulder remained in the state described. She afterwards continued to do her ordinary work, till last January, when she began to suffer violent pain in the affected shoulder, and subsequently lost the use of her arm.

Without very sanguine hopes of the success of the treatment, I yet determined, as there was not much probability of the individual being made more helpless by the operation, to try the effects of a seton in producing a reunion of the broken acromion and of the acromio-clavicular articulation. The patient agreed to the proposal, and May 29th was fixed for its execution, but owing to her being feverish and unwell on that day, it was postponed to the next prescribing day.

June 1st.—The patient seeming sufficiently well, I passed a seton through the acromio-clavicular articulation, and another through the fractured neck of the acromion. The patient being exposed in returning through the yard to her ward, was seized directly afterwards with a chill, which lasted half an hour and was succeeded by fever.

The same night, or the succeeding, was attended with a storm of wind and rain. An unruly patient, in the same ward, threw up the window at the head of M'Graw's bed, while she was asleep, and left it open.

June 2d.—Chill at 10 A. M. followed by fever, head-ache, bad taste. Venesection ℥vii. ℞. Sulph. Magnes. ℥ss.—Carb. Magnes. ʒss. M. Ft. Haustus.

June 3d.—Renewal of symptoms of preceding day. Seidlitz powder, ℞. Sal. nit. ʒij., ant. tart. gr. i., aq. ℥viii. A table-spoonful every hour during fever. This mixture was discontinued after a few doses, from its producing too much nausea.

June 4th.—Pain in the epigastrium. Skin cool, pulse natural, tongue slightly furred, bad taste, restlessness. Shoulder manifests inflammation, and discharges pus from the setons. Desault's bandage applied. The symptoms continued with but little variety till the 10th. A mild febrifuge treatment was followed.

June 10th.—Pulse full, head-ache, face flushed, bilious vomiting, great tenderness in epigastrium—forty leeches to epigastrium—sodaic powder.

June 12th.—Tenderness of epigastrium diminished much, but vomiting continues at intervals. Skin cold and clammy, countenance distressed, bowels too loose. No sleep last night. Large discharge from shoulder. Lime water and milk. Cretaceous mixture.

June 14th.—Skin hot and dry. Tongue dry and furred. Stomach still out of order. Some tenderness in epigastrium. Blister to epigastrium. Ptisane of sal. nitri.

June 15th.—Stomach still irritable, tongue brown, alvine evacuations green. Tenderness in epigastrium. Fifteen leeches to epigastric region. Calomel half a grain every two hours.

June 16th.—Symptoms the same. Discontinue calomel. Saline mixture.

June 18th.—Severe chill, which lasted several hours, skin cold and clammy, frothing at mouth, extremities cold, countenance cadaverous. Hot bricks to feet and trunk. Hot lemonade.

June 19th.—Sinking still. Skin polished, pulse small and feeble, tongue dry and brown, extremities cold, especially the arms. Extreme pain in epigastrium on pressure; alvine discharges sometimes green and sometimes yellow. Blister to abdomen. Volatile julep ℥ss. every two hours. Wine panada. Garlic poultice to soles of feet.

June 20th.—Symptoms continue. Treatment continued.

June 21st.—Died.

Autopsy.—Abdomen. The peritoneal surface of this cavity and of its viscera, universally of a clear white pearl colour, and destitute of adhesions.

Stomach. Moderately distended with flatus and contained the last articles of medicine and of nourishment. Its mucous coat for the most part of a white colour, and destitute of injected vessels; yet in the cardiac half, particularly the cul de sac, many of the large veins were occupied with blood, and led to blotches of blood now almost removed; but which were yet sufficiently obvious when the part was held between the eye and a window; mucous coat in left half so softened that it could be readily scraped away with the finger.

Intestines healthy, light coloured, and diaphanous, excepting the duodenum, the internal coat of which was much injected, hardened, thickened, and with much less appearance of valvulæ conniventes than usual.

Liver of a brownish yellow colour, as in intemperate persons, somewhat indurated, and had on its upper surface a hydatid the size of a nutmeg.

Spleen natural, but larger than usual.

Pancreas white, and much indurated.

Uterus and its appendages, healthy.

The shoulder joint had been completely ruined by the original accident, its capsular ligament being torn up all around, and scarce a vestige of it left. The long head of biceps broken, insertion of supra spinatus detached, and head of bone next to deltoides could be thrown about in any direction. The articular cartilages of both bones had been absorbed, and the head of the humerus flattened. A new cavity on the posterior edge of the old glenoid had began to be formed.

Acromion broken at neck—acromio-clavicular articulation destroyed; either the end of the clavicle, or an ossified inter-articular cartilage was in the place of the latter joint.

The seton in passing through the acromio-clavicular articulation, had been introduced into the cavity made by the lacerated state of the capsule of the shoulder joint.

This case, in which there was unequivocally marked gastric irritation, proves, that when an acute inflammation of the stomach has persisted for some days, though it terminates in death, no very great redness of the internal membrane may be manifest, and consequently that it is impossible to estimate the state of irritation of an organ during life, solely by the quantity of blood left in it after death. Dying seems to have the effect of concentrating more and more towards the heart, the vital powers, and the fluids, or in other words, withdrawing them from the circumference to the centre; in the same way that a prudent general, on finding his outposts too much extended for the size of his army, will contract them more and more, as his force diminishes by battle and disease. See Pl. I. fig. 6.

In speaking with Dr. Physick, on the affections of the stomach, he told me that his experience led him to think that the highest grades of its irritation were attended neither by pain nor vomiting. The state of inflammation is so exalted, that its effects approximate those of the most deleterious poisons which cause sudden death without local pain, fever, or any very sensible derangement of the functions, except mere weakness and a sense of illness. The following instance will illustrate this:

Observation 6th. Acute Gastritis.—Henry Turner, a black man, aged fifty-five, assistant in the apothecaries shop, at the Alms-house, after an apparently slight indisposition of a few days, which seemed to require rest rather than any thing else, while sitting up in his bed, suddenly expired almost without a struggle, May 4th, 1827. On dissection, twenty-four hours afterwards, the stomach was found of middle size, thick and dense, its mucous coat thrown into numerous, well-marked, elevated rugæ, and almost universally of a deep arterial red; the red globules of blood were extravasated in numerous spots and blotches in the thickness of the mucous coat and along the summits of the rugæ. This was a patient of Dr. Hodge, and I witnessed the dissection by chance. I declared unhesitatingly that the disease was an exasperated inflammation of the stomach, but owing to the want of an assignable cause for it, as well as the want of appropriate symptoms during life, the opinion was not very readily acquiesced in. In a few days afterwards it was ascertained through Mr. Marks, the apothecary at the Alms-house, that Turner had been taking private draughts from the bottle of Hoffman's Anodyne; at least, the quantity missing, could be accounted for in no other way.

Observation 7th. Chronic Peritonitis and Gastro-enteritis.—Alms-house, July 26, 1827. Examination twelve hours after death.

John Neaman, aged seventy-seven, has been for two years a resident of this house. For the last nine weeks has experienced a want of appetite, a sense of fulness over the abdomen, and pain in that region, but not so severe as to make him complain, or disquiet him much. Has had no diarrhœa, no vomiting, and no fever which called the attention of persons around. Eight days ago the little food which he was in the habit of taking, produced such a sense of fullness and distress that he determined to take no more, or at least the smallest possible quantity, since then he has taken a little bread, and now and then a spoonful of milk. His complaints being obscure, there has been no medical treatment within those eight days, and scarcely any before. At a distant time, which is not precisely remembered, some tincture of bark was administered by one of the young men of the house. He died seemingly from exhaustion.

Exterior habit. Skin pallid as usual after death. Marasmus not exceeding that common at his time of life.

Abdomen. Peritoneum rough, with universal small miliary bodies, resembling tubercles; thickened somewhat by a coating of coagulating lymph, continuous with the tubercles. Peritoneum, on abdominal muscles and also on diaphragm, interspersed with patches of red blood; small coagula of blood adhering to its interior in many places—and abundant points of the same, as if from ruptured vessels; its cavity contained about three quarts of fluid, half serum and half blood, blended; coagula of blood floating in this mixture. Mesentery studded at distant intervals with these small points of blood.

Stomach. Exterior or peritoneal aspect, pallid and healthy. Internal condition; contained no food, and a little mucus tinged with bile; cardiac termination of mucous coat of œsophagus of a deep red, from distinctly injected vessels; the whole mucous coat interspersed at somewhat distant intervals with small black spots of extravasated blood from half a line to one line in diameter. For three inches around the pyloric orifice, these spots were more abundant and larger.

Small intestine. Mucous coat healthy, but the peritoneal coat of the colour of lampblack in many parts, and more or less of a sooty hue in its whole length.

Large intestine. Exterior or peritoneal face healthy, but dull from the disorganization beneath it. Mucous coat covered with black patches of blood extravasated in its thickness and beneath it; it resembled very much the spotted appearance of some of the sea shells, and contained a small quantity of hardened fæces. Small miliary bodies like those on the peritoneum abounding in it, but I could not distinguish whether they were mucous glands, or such tubercles as existed on the peritoneum.

Liver. Small and flabby.

Spleen. Natural.

Thorax. Lungs healthy, a slight manifestation at very distant intervals on the pleura, of the same sort of action that prevailed in peritoneum—but no effusion except of serum in a small quantity which might have occurred after death.

Head not examined. See Pl. I. figs. 7, 8, 9.

The following are examples that redness is not found invariably in those exalted irritations of the stomach producing immediate death.

Observation 8*th*, *Jan.* 28*th*, 1827. *Gastric Irritation.*—The daughter, aged eight months, of Mrs. A. D. without previous indisposition, and while playing in apparently excellent health on the lap of her aunt, was taken with a sudden spasm, and died instantly. This occurred after a hearty draught of cow's milk, on which the child was accustomed to feed.

The day following I made an examination, twenty-four hours after death, with Dr. James, the family physician, and the following appearances were presented:—

Head. The flat bones much tinged with congested blood. The veins of the pia mater turgid. Serum under tunica arachnoidea; a drachm of serum in the right ventricle of the brain.

Thorax. Every thing natural.

Abdomen. About one gill of a cheese-like coagulum of milk in the stomach. The serous part had been continually running out of the mouth and nostrils since the death of the child, so as to require the constant use of cloths to soak it up, the quantity, therefore, could not be rigidly estimated, but probably did not fall short of two gills. *The mucous coat of the stomach was not vascular, but of a pearl colour.*

All the mesenteric glands were very much enlarged, but had nothing of a scrofulous consistence or texture.

The child, owing to the ill-health of the mother, had been weaned at the age of one month, and brought up on cow's milk. That the coagulum formed from the latter was indigestible perhaps from the quantity, is proved by the fact, that pieces of it tinged slightly with bile, were found in the lower part of the jejunum. It is pretty clear in this case, that the undue quantity of coagulum in the stomach was the cause of death.

Observation 9*th*, *March* 29*th*, 1826. *Gastric Irritation.*—Yesterday the infant daughter, aged ten months, of Mr. W. H. was seized, in a short time after eating half a table-spoonful of rice pudding, with convulsions. The insensibility was complete, and the spasm universal; respiration was carried on with the greatest difficulty, irregularity, and interruption. This was at half past four o'clock, P. M. Happening to pass the house, almost at that instant, my assistance was requested; in a few minutes, Drs. Hodge and Griffith arrived.

A warm bath was immediately resorted to. Three grains of tartar emetic were dissolved in a wine-glassful of water, and administered by the tea-spoonful, every five or ten minutes. The attempt to raise a vein in the arm being ineffectual, I opened on the right side of the head, three superficial veins, and on the left side two, along with a branch of the temporal artery. From these several openings, about three and a half ounces of blood were drawn. About three-fourths of an hour were thus consumed, when the convulsions ceased. As the infant was teething, the gums were then cut with a lancet.

The child was an unusually fine one; had to the moment of illness enjoyed most excellent health, and had, indeed, been out on a visit to its friends that very morning. The indication seemed, therefore, sufficiently marked, that the rice pudding, along with a prune which had been eaten in the morning, was the cause of the convulsions, and that these matters, if possible, should be expelled from the stomach.

As, notwithstanding the cessation of the convulsions, the insensibility and difficult respiration still remained without much mitigation, about twenty-five grains of pulv. ipecac. in three tea-spoonfuls of brandy, were administered in divided doses, at small intervals of time. This not producing the desired effect, a tea-spoonful of powdered mustard was given by portions, which also failing, twelve grains of sulphate of zinc were next given in divisions. This also failing, we next resorted to tickling the fauces with the finger, and to the introduction of a feather down the œsophagus, almost to the cardiac orifice of the stomach, some five or six times; still there was no vomiting induced. These several trials occupied until 8 P. M. when the child revived very much, and was able to sit up.

It should also be mentioned that sinapisms had been, during our efforts, applied to the soles of the feet and to the epigastrium; and that two or three injections of spirit of turpentine had been administered, with the effect of purging as often.

About 10 o'clock, P. M. the infant seemed to recognize persons, smiled on being addressed in a soothing, playful manner, and afforded a prospect of recovery. At half past twelve o'clock at night, after a slight convulsion, it died.

Autopsy, seventeen hours after death, the weather being moderate, and no putrefaction.

Head. Vessels of pia mater so congested with blood as to be almost apoplectic. Brain congested also.

Abdomen. Stomach flaccid and of the middle size, contained the rice pudding undigested, with a small part of the skin of a prune; its mucous membrane of a light pink colour. The mesenteric glands were enlarged and numerous: the child had been fed occasionally on cow's milk.

Dr. Physick informed me that he had saved a child, affected in a similar way, from eating a piece of pear. During the prevalence of the convulsions, the child not being able to swallow, a large quantity of tart. emetic and ipecacuanha was injected, by a syringe, into the stomach, through a catheter introduced down the throat; the piece of pear was thrown up by vomiting, and the child saved. He also told me that Mr. L. once lay in a stupor for several hours, from swallowing some article of food extremely difficult to digest, he also was relieved by its expulsion.

Observation 10*th. Softening of the Stomach.*—In the summer of 1825, I dissected, for Dr. Otto, an infant child, (about two years old,) of Mrs. S. S. who was unwell for a week, without there being any well marked symptoms of the nature of its disease. I found the left extremity of the stomach disorganized in all its coats, having been reduced to a light mahogany coloured and pulpy state, about the consistence of a piece of glue soaked in cold water for twenty-four hours. Having no suspicion at the moment of such a state of the organ, I lacerated it, inadvertently, while only using a common force in drawing it upwards for examination. There was no undue redness in the mucous coat.

The brain of this child was large and somewhat congested, but not to a remarkable degree.

Observation 11*th. Softening of the Stomach.*—Dr. La R. of this city, lost a child, in 1826, about four weeks old, in whom I found the stomach in a similar state of dissolution or softening. There had been, however, much pain in his infant, and flatulent tension of the abdomen.

These observations upon the stomachs of children, illustrate sufficiently the fact, that the most extreme irritations of the stomach may exist during life, and may even be fatal, but yet not be manifested after death by unusual redness of the tissues affected. It would be indeed unphilosophical, and inconsistent with pathological observations on other parts, to exact from the stomach an invariable manifestation of disease, by redness and injection of its mucous surface after death. Let the redness of the skin in erysipelas be ever so strong during life, it frequently disappears wholly, by the retreat of the blood from its capillaries during death. Measles are similar in this respect, and the fact already mentioned is very worthy of attention, that if a fine injection be thrown into a subject who has died at the height of the eruption, the vessels originally dilated by the irritation, manifest themselves by the greater quantity of injecting matter they receive; or in other words, the eruption may be renewed after death, as I have satisfactorily ascertained by experiment. If any conjecture could be hazarded on these points, we are disposed to believe that during the process of death, the vitality of parts in a state of inflammation is frequently so far diminished that they no longer have the power of attracting the fluids in undue quantity to them, consequently their redness disappears.

Acute inflammation of mucous tissues generally only thickens inconsiderably the part affected. It is attended by an increased secretion of mucus, of serum, of fibrino-mucous matter; and even an exhalation of red blood, from the blood-vessels being so extremely superficial. We see continually these phenomena going on in inflammation of the Schneiderian membrane and in colitis.

It has been seen that if an acute inflammation of the gastro-intestinal mucous membrane does not kill in its early stages, the injection with red blood is frequently by no means so great as it would have been in the case of an earlier death, and the changes which I have generally observed, are as follow:—The stomach and bowels assume a dirty yellow or liquorice colour, the stomach presents internally small blotches of red at intervals, and frequently are found small filaments of coagulated blood adhering to the mucous coat of the stomach, seemingly at the orifices of the vessels from which they were discharged. The veins of the bowels are either partially or generally filled with blood. The intestinal mucus is abundant, adheres closely, and is tinged yellow by the bile. The mucous membrane of the stomach is easily pealed or scraped off by the finger nail. The brain in this state most frequently exhibits marks of congestion, and with some inflammation of its meninges. The eyes and skin are yellow. In the skin there are apt to be left blotches of red blood, resembling purpura.

Yellow Fever.—In my notes of dissections, performed on four yellow fever patients, in the year 1820, I find the following remarks. In a female patient, aged forty, whose period of the disease I did not learn, the stomach contained a gill of black vomit, was of a natural thickness and texture, and presented over its whole mucous coat in different regions, patches or blotches of extravasated blood. In a seaman belonging to the brig Martha, who had been sick at least nine or ten days, the stomach contained also black vomit, and was beset with small red points and spots of ecchymosed blood. In a third patient, a man aged forty, who complained slightly in the morning of one day, and was dead the next at seven o'clock, A. M. I found the stomach extensively ecchymosed in its mucous coat, and its veins distended with blood; the black vomit was in great abundance in the stomach and intestines. In the fourth patient, a girl aged fourteen, who died on the fourth day of the disease, the mucous coat of the stomach and small intestine did not present the appearance of ecchymosis, but merely a minute arborescence of its veins.

Observation 12*th.* *Acute Gastritis.*—During the month of July of the year 1826, I lost a patient, Jno. Henderson, aged about sixty, from a violent remittent fever of about eight days duration, attended with great prostration of strength, tenderness in the epigastrium, irritability of stomach, high fever with coma and occasional delirium; a saffron-coloured skin and black tongue attended the last days of his disease. I examined him in the presence of Drs. Hodge and La Roche; the peritoneal surface of the abdomen and of its viscera we found healthy, but the mucous coat of the stomach presented in its cardiac portion a large motley patch of ecchymosed blood, as big as the palm of my hand; it also presented smaller patches of ecchymosis in other regions. His symptoms were with the exception of black vomit, of such intensity, that his case would, in times of yellow fever, have been set down to that disease.

The same patched appearance sometimes is extended into the intestinal canal.

Observation 13*th.* *May* 30, 1827. *Gastritis.*—I dissected Edward Bloom, aged thirty-eight, a patient in the Alms-house. After a debauched course of life of some continuance, he was brought into the syphilitic ward, for a sloughing ulcer of penis, with mortification of the adjoining skin, without any well marked sympathies, except a general prostration of his intellectual and physical powers; he died in five or six days after his admission. Though there were no prominent gastric symptoms as extreme irritability of stomach, tenderness in the epigastrium, &c. we yet found the left end of the stomach, the jejunum, and the ascending colon in a patched ecchymosed state, with here and there mahogany coloured spots along the intestinal tube, arising from the collection of blood. The yellowish, semi-putrescent tinge which the intestines under such circumstances are apt to have, was also present.

From the liability we are in to confound the redness of the stomach indicative of its inflammation during life, with the redness depending upon an obstruction to the circulation during the agonies of death, a principal object of the preceding pages has been to point out their difference, and to establish the important fact of gastric inflammation in most of those cases where the redness is observed. It is now proved that the redness arising from simple congestion, like the redness from injection, is uniformly diffused, whereas the redness from inflammation is generally partial and in patches, sometimes in the mucous membrane of the cardiac extremity of the stomach, and sometimes in that of the pyloric extremity.

Simple obstruction to the current of blood during the agonies of death, could never produce such appearances, for if it could, we ought to meet with them invariably. On the contrary, where an obstruction does occur, which I am disposed to believe is very uncommon in natural death, whether this obstruction arises from the liver or from the lungs, the arrest of blood should be manifested by an uniform tinge of red in the organs concerned, and not by patches here and there. Such marks of obstruction should also be more frequently seen and better developed, in cases of enlarged, indurated liver, in consumption, in dropsy of the thorax, and in all cases of obstruction of the lungs.

In concluding these observations, I should do injustice to an artist of uncommon merit and ingenuity, were I to withhold the marked expression of my sense of the invaluable services rendered by Mr. Drayton, in promptly and faithfully executing the drawings of the parts represented in the plate, and in subsequently executing the engravings; I have also to acknowledge the characteristic liberality of the publishers, in freely allowing me the advantage of an unrestrained use of his talents.

ART. II. *On the Functions of the Capsulæ Renales.* By JOHN REDMAN COXE, M. D. Professor of Materia Medica and Pharmacy in the University of Pennsylvania.

IT is now nearly three centuries* since EUSTACHIUS published his book "De renibus," in which, for the first time, the capsulæ renales are pointed out and described. Notwithstanding, however, the long period that has elapsed since their discovery, their use in the animal œconomy still remains a mystery, almost as many offices having been attributed to them, as there have been writers on the subject. It is my intention to point out what I conceive to be their function; and, although, when I first took up its consideration, I believed the opinion I entertain was original; yet, on recurring to our authorities in anatomy, I found that others had conceived a similar idea, though the opinion seems not to have been very zealously maintained, even by the individual who first suggested it; while it had been most powerfully opposed by every other writer. MOLINETTI, who flourished

* In 1563.

about a century and a half since, and Charles Bell, are the only anatomists who seem to have advocated the opinion, that the capsulæ renales, were merely diverticula of blood, from the kidneys, to prevent the secretion of urine in the fœtal state; yet so little have they said to substantiate their opinion, that it appears more like a random thought, than the result of a deliberate and serious reflection.

It being obvious that both in a physiological and pathological point of view, a correct opinion of the functions of any part of the body, is desirable, and must be of practical utility to the physician and surgeon, on many occasions; any attempt to fix the functional character of these bodies, must be considered as advantageous.

The capsulæ renales are almost universal in quadrupeds, whether carniverous or herbiverous—in birds—in cold-blooded reptiles; and perhaps, we may say, generally, in every animal, in whom a renal conformation exists. By consulting Haller's Physiology, 7. p. 286, et sequent. we find that different anatomists have noticed them, in the dog, fox, civet, lion, tyger, bat—the horse, ox, elephant, sheep, goat, stag, hedge-hog, porcupine, mole, dormouse, sow, marmot, and many others—in the serpent, viper, tortoise, &c. and in the eagle, vulture, crow, duck, swallow, &c. Now from this we infer, that what is so universal, must be of some great and general utility; and that any explanation of the functions of these bodies, must indubitably rest, in a great degree on this fact. In man, they have never, that I can learn, been found wanting; nevertheless, anomalies in this respect, may have occurred, although unnoticed. They rarely differ in number, being usually the same as the kidneys themselves. It may, however, be an interesting subject of investigation, whether, in case of a single kidney, more than one capsule exists; or if three or more kidneys are found, an equal number of these capsules are not also present. Bartholine mentions a case in which four were seen by him; though Haller thinks it probable that two of them were only lumbar glands. He tells us also, that Morgagni saw three; and Rhodius, two on the left side. These anomalies are, however, of little comparative importance; and we may venture to affirm, that, except in a few cases of monstrosity, the number of these bodies will always be found equal to that of the kidneys; and this fact serves in some degree to establish their intimate connexion with, or subserviency to those glands, in some period of existence.

I shall enter into the anatomical structure of these organs, so far only as is requisite to elucidate the position I assume, as to their use in the animal economy; referring those who feel an interest in the inquiry to our systems of anatomy for further particulars.

From the general description of all anatomists, we learn that on the upper edge of each kidney, is found a particular body, having some analogy to a gland, but differing therefrom in *no excretory duct having ever been detected.* Its form is very various, and probably dependant on the age of the subject, it having been seen quadrangular, triangular, orbicular, and oval. It is somewhat like the kidney, being larger above, and ending, as some have described it, in a kind of conic figure; all which varieties, as above remarked, are probably owing to the age of the individual in whom they have been examined. What is of greater importance, is, that with very few exceptions, they are always larger in the fœtal than in the adult state; in fact, before birth, they are mostly larger than the kidney itself, but gradually diminish in size, after birth; and in the adult and aged subject, they are very small, when compared with the kidneys themselves.

These organs are uniformly described as being largely supplied with blood-vessels; the arteries, coming from the aorta, and the renal and diaphragmatic arteries; the veins from the vena cava and from the renal and diaphragmatic. Some slight variation is occasionally found; for the vessels are not always alike numerous, nor do they invariably proceed from the same sources.

The interior of these bodies has a narrow, triangular cavity, varying in size, probably from the difference of age; and in colour likewise from the same cause. A granulated or follicular substance usually fills the cavity, which cavity is connected with the veins, as it may be distended by blowing air into those vessels. The capsular vein communicates with the inside of the capsule, like the splenic vein with the cells of the spleen.

In conformation, these bodies are generally more regular, solid, and consistent in the fœtus and young children, than in adults. In old age, they often become flaccid; and are much decayed.

From these data it would seem correct to infer, that, whatever be their use, that use is restricted chiefly to the fœtal state, and that all inquiries as to their physiology must chiefly be limited to that period of life.

Eustachius, their first discoverer, called them glandulæ renibus incumbentus. Bartholine gave them the name of capsulæ atrabilariæ, CASSERIUS that of the renes succenturiati, and DIEMERBROECK, glandulæ renales: but all these names, founded on their presumed uses, are manifestly incorrect. The non-existence of an excretory duct, proves them not to be glands within the genuine acceptation of the term; and the uses assigned by different writers to them, not having been proved, the names assumed cannot be considered as well-founded, and ought to be expunged from the systems of anatomy.*

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* See note at the end of this essay.

Any person desirous of informing himself fully on the subject of these bodies will find an ample detail in the Dict. des Sciences Medicales, v. 47, p. 412, in which, all that has heretofore been said of them is reported. We learn, that, as before stated, they are much developed in the fœtus; but that, as soon as birth takes place, the descent of the diaphragm in respiration impedes their further growth, and from that time they may be said to diminish in size, whilst that of the kidneys progressively augments. There can, I think, be little doubt that the pressure of the diaphragm upon them, must have a considerable influence in diminishing the flow of blood to them; and thereby compel that fluid to pass in a greater amount to the kidneys, when their functions as diverticula are thus arrested. This serves in a measure, to explain why the use they may have exercised in the fœtal state is no longer required after birth—the blood now passes directly to the kidneys, in larger amount; and vessels, heretofore merely kept pervious, are enlarged, by the cessation of the office of the capsules now no longer required. In this we perceive some analogy with the lungs, through which, undoubtedly, a small portion of blood must flow, to keep those vessels pervious, which, after birth, are destined to circulate the whole sanguineous stream, when the diverticula of the ductus arteriosus and foramen ovale are suspended in their operation.

Molinetti, as I have already stated, considered the renal capsules of use, only to *prevent the secretion of urine* in the fœtus; his luminous conception of the subject seems, however, to have met but little attention; objections, indeed, were raised against his opinion, which appear to me more specious than valid. Thus it has been asserted that the renal capsules ought not to be looked upon as simple receptacles—as there would have been no occasion for their wonderful structure on this account. Certainly this objection, backed by no other proof, than what the author thinks ought to be the case, can scarcely be deemed conclusive. The spleen, in all probability, with a formation equally wonderful, serves some similar purpose in the animal economy.—It has been also affirmed, that it *is certain*, (of which no proof is given,) some secretion is performed in them. Now, if this be the case, it is most extraordinary that no excretory duct has ever been discovered in all the attempts for this purpose; and Haller doubts whether they do secrete a humour peculiar to themselves. No fluid is found in them in the adult state; although in children, and especially in the fœtus, they do contain a small quantity of a yellowish or reddish humour, the remains probably of the blood that passed there. Another objection to Molinetti's opinion, is, that it supposes the fœtus to make no water, which it is presumed is overturned by the affirmed discovery of the allantois, by Bidloo. Now I believe this idea, at least as it respects the human fœtus, is no longer maintained; and as it relates to the analysis of the amniotic fluid, we find little to countenance the presence of urine or its constituents, therein, which might be presumed to be mixed with it, through the medium of the urethra. It has also been said, that it could not be conceived, how such small arteries should intercept so great a quantity of blood. To this it may be said, that the arteries, if small, are numerous, and the fœtal pulse is probably infinitely more rapid than after birth. At any rate, it is an objection not established by any fact, and may therefore well be considered as of no force.

Let us, however, consider for a moment a question of fact, viz.: Does the fœtus in utero secrete urine?

Bartholine, speaking of the membranes of the fœtus, adverts to the allantois, (a term derived from the Greek αλλας, signifying a sausage, from its being a sort of elongated vessel, which does not surround the whole fœtus, but is rather like a girdle,) situated between the chorion and amnion, and communicating with the bladder by means of the urachus. Its use, according to Bartholine, is to receive the urine in brutes; for in man, he tells us, it is not present. In man, he adds, the amnion receives the urine, mixed with the sweat. This membrane has however been denied existence even in brutes, by some writers; its existence is nevertheless said to be very manifest in brutes during gestation, (Dict. des Sc. Med. 1. p. 410,) but is with difficulty seen in the human ovum, being only met with from the second to the fourth month of gestation, nor are we sure that it communicates with the bladder. We may moreover add, that some writers have endeavoured to prove, that, even in animals, it is not intended to receive the urine, but that it transmits to the bladder, by the urachus, the fluid it contains, to serve for nourishment to the young individual. We may I think safely set this down as hypothetical, and admit that the particular use of the allantois is altogether unknown. If then the human fœtus wants this receptacle, (which indeed for the mere purpose of receiving the urine, seems altogether unnecessary, in either man or brutes, as the bladder might be presumed adequate,) it should follow, that any urine secreted in the fœtal state, ought to be found either in the bladder, or intermixed with the liquor amnii. We have however no reason to believe that this last is the fact, since the analysis of that fluid by Buniva, Vauquelin, Berzelius, and others, proves sufficiently that all the characters of urine are wanting in it, (see Johnson's Animal Chemistry;) and as it respects the existence of urine in the bladder, no fluid of any amount has been detected therein. What little has been found, seems indeed to want the requisite of urea and of many of the saline ingredients which are noticed in it after birth. Independently of this too, the amount is far too small for any reasonable views on the subject, founded on calculation. Haller states the quantity of urine discharged by the adult, to be from twenty-eight to sixty-four ounces in the twenty-four hours. Now, if we consider the fœtus as only beginning to secrete it when five months old, it will leave four months or one hundred and twenty days to the period of birth. Suppose we take the moderate quantity of only half an ounce per day, secreted during that space of time. This will be nearly equal to four pounds, which ought to be found in the bladder or in the liquor amnii at birth; but we have stated that analysis gives no evidence of the presence of urine in the last; and instances are recorded in which the urethra was closed at birth, but in which no fluid was present in the bladder. We have, therefore, a right to ask of those who contend for this secretion in the fœtal state, conclusive evidence of the fact, but which we believe cannot be given, nor any satisfactory channel pointed out by which it may have escaped. We may then admit, I think, that in the period of gestation, only so much blood percolates the vessels of the kidney, as will suffice to keep them pervious for their important functions after birth; whilst the full amount which, according to the laws of circulation, would otherwise be conveyed through them, is diverted off, by the renal capsules, and carried immediately back into the vena cava.

Vaughan in his anatomy, 2, p. 132, adverting to this opinion, that the capsules are to be regarded as diverticula in the fœtus, to divert the blood from the kidneys, and lessen the amount of urine, adds, "but if so, why do they remain in adults, and not disappear like other diverticula?" Now what are the diverticula of whose functions as such we are assured? The ductus arteriosus and foramen ovale, are perhaps the only unquestionable ones we are acquainted with, and their vestiges are conspicuous to the latest period. The thymus gland is probably of a like nature, and it never entirely disappears. If the spleen is of a similar character, we find it continuing its functions to the end of life. Is there not however full as much necessity apparently, for a diverticulum for the blood from the kidneys in the fœtal state as from the lungs? Both of these organs seem to come fully into operation only after birth; and of all the uses ascribed to the capsules, not one is found to quadrate with fact, as well as with reason, but that which ascribes to them the functions of diverticula, as a wise provision of nature, to guard the kidneys from the overflow of blood, which, by the common laws of circulation would otherwise be carried to them. All other uses are incongruous, and entirely hypothetical, with scarcely a solitary fact to give them the slightest credit. As to their continuance in the adult state, notwithstanding their evident and acknowledged decrease, it is very possible, nay probable, that their functions are never absolutely terminated. The numerous instances recorded, of immense amount of urine in the bladder in certain cases of retention, and the surprising instances of long-continued suppression of urine, appear, alike to prove that some diverticulum has been called into operation to arrest the fatal issue of those complaints. If, in cases of retention, the average amount of two pounds may be supposed to be secreted daily, as formerly adverted to, then, in proportion to the number of days during which the disease continues, we ought to find in the bladder an equal number of quarts of that fluid; but is it ever in that amount? Does not nature, here, in order to obviate in a degree the effects of disease, enable the renal capsules to resume their original functions? I think it at least probable. Again, in cases of suppression for days, what becomes of the blood determined to the kidneys, if not conveyed away by some other channel? How could a total suspension of the secretion of urine ensue, the kidneys being found after death in many instances free of disease? Death indeed does not always follow even the most extended cases of this nature, of which the following are a few of many instances on record. La Motte, (Traité complet des Accouch. p. 567,) mentions the complete suppression in a woman of sixty years, for seventeen days. The first discharges on recovery being bloody, but gradually passing to the state of urine. Desault, (Traité des Mal. des voies Urin. p. 32,) says, that in hysteric affections, the suppression has continued for more than forty days. In the Dict. des Sci. Med. 47, p. 429, are several cases—amongst others, one of a patient of fifty years, reported by M. de Claubry, continuing for nine days, and another from Dr. Vieussen, of a little girl, eleven years of age, who had for eighteen months a total suppression, from which she recovered. In both cases, the suppression of so important a secretion, was unaccompanied by those frightful symptoms commonly existing. There is another still more extraordinary case given, of a suppression continuing for seven years, from which the patient recovered, and died many years afterwards of another disease. Now, in all these cases, it is scarcely possible to resist the impression, that the danger was obviated by means of a diverticulum—and if so, what more probable than the resumption of their original functions by the renal capsules.

If more cases of a like character are required, they may be found in the philosophical transactions of Great Britain—especially one of a boy, who never made water, but lived in perfect health to his seventeenth year, a constant diarrhœa attending. This is related by Dr. Richardson, V. 28, p. 167.

Boerhaave had an idea of the urine that it served as a means of expelling the portion of our humours tending to putrefaction, and which is calculated to bring others into the same septic disposition—how far this is correct, I shall not pretend to say; our present views in relation to it, seem to be, that it is intended to convey away the salts introduced into the system, or which are formed by the actions of life. If either view be adopted, we may perceive, why, in the fœtal state, the secretion of urine can scarcely be said to take place, inasmuch as any, then formed, is deficient in the characteristic property of urea, a substance of a very singular nature, and consisting of a predominancy of nitrogen, which is nearly 40 per cent. in amount of that principle. The kidneys may then be regarded as the principal channel for conveying off the nitrogen, as the lungs for carbon, and perhaps the liver for hydrogen; but as this principle does not predominate in the fœtal state, it of course does not require to be then discharged, and the kidneys only take on their perfect functions, when an excess of nitrogen is introduced, requiring elimination, viz. after birth. Of course, all that is requisite in the fœtal state, is merely that the vessels of the kidneys be kept pervious, whilst the excess of blood, carried off by the diverticulum of the renal capsules, finds its way to the mother, and has its azotic portion eliminated through her kidneys.

I shall only add further, that these organs are the seat of disease, as demonstrated by dissection; thus Greiselius found the left capsule, in a man of forty-five years old, of great size; concealing an abscess filled with twelve pounds of putrid sanious matter, which being evacuated, the capsule weighed more than two pounds. Portal mentions a boy of two months, in whom the capsule was filled with a liquor like the blackest ink, and was larger than a pigeon's egg. Blasius mentions a woman of fifty years old, in whom the capsule was equal to the fist, soft, reddish, and filled with black purulent matter, and with much gravel and sand; and Bartholine states the right capsule in a melancholic patient, to have been longer and larger than the spleen, and to have had a double cavity.

Upon the whole, after duly considering the subject, I am more than ever convinced, that no other use can be ascribed to the renal capsules, than that of diverticula in the fœtal state; and that the probability is, that their functions are never entirely suspended; at least, that on many occasions of disease, they resume in a certain degree their former functions, and thereby co-operate in suspending the fatal issue of many cases, which would otherwise occur. If I am correct in the positions thus advanced, I think all the names by which these organs have been hitherto distinguished, should be abolished, and that of *diverticula urinæ* should be substituted in their place.

NOTE.

Perhaps a succinct account of the various opinions of the uses of these organs, may not be improperly introduced here; that the reader may compare the probabilities of each. *Eustachius,* their discoverer, seems to have acted with uncommon modesty, in not venturing to assign any use to them, that I can find; he merely calls them the renal glands, from their vicinity to the kidneys. *Casserius, Bauhin,* and others, were persuaded they aided in the secretion of urine—hence the name of succenturiatæ glandulæ. *Spigelius* supposed them made to fill up the space between the kidneys and diaphragm, to support the stomach in the part above the emulgent veins and arteries; and also to absorb the moisture that sweats from the neighbouring vessels. *Wharton* and *Riolan,* by whom they were named glandulæ ad plexum positæ, gave them that appellation, because they cover the semi-lunar ganglions, and the beginning of the plexus, which the great intercostal nerve forms in the belly; and they thought their sole use was to support these plexuses—considering, that otherwise they would have pressed too much on the emulgent veins. *Sylvius* imagined an acrid juice was separated in the capsules, which, mixed with the blood returning from the kidneys, after the secretion of urine, served to dilute it and excite the action of the vena cava upon it. The elder *Bartholine,* (Gaspard,) having found them filled with a fluid of an obscure brown colour, believed them to be the secretory organ of the atrabilis; and that this humour was taken up by the capsular veins, and carried to the kidneys by means of the renal veins; hence he gave them the name of capsulæ atrabilariæ. Gaspard was unacquainted with the circulation, and is considered excusable in his ideas; but *Thomas,* his son, in defending the opinion, in opposition to his knowledge of the circulation, says, that the atrabilis, thicker and heavier than the blood, might have in the capsules and renal veins, a *retrograde motion* from that of the blood, in order to reach the kidneys—and *Petrucci,* a Roman physician, not much more than half a century past, even affirmed that he had discovered valves in the capsular veins, disposed contrary to those of other veins, and fitted to favour the passage of the atrabilis to the kidneys. Bartholine moreover considered them as separating from the blood, the colouring matter of urine.

Some authors have made them the seat of various passions. *Collins* says their use is to impart a fermentative liquor flowing out of the termination of the nerves, by some direct passages into the body of the glands belonging to the kidneys, to dispose the blood in order to the secretion of the serous and saline parts from the vital liquor. *Kerkringius* ascribed to them a power of secreting a juice fitted to colour and animate the blood. *Valsalva* thought he had discovered their communication with the testicles, and that they aided in the seminal secretion. *Senac* supposed they secreted the fœtal meconium —and *Van Helmont,* that they secreted a juice endowed with lithontriptic powers, created by his archæus, to prevent the formation of renal calculi. *Lieutaud* viewed them as separating an acrid, penetrating liquor, very fit to prevent the formations of concretions in the vena cava. *Boerhaave* assigned them the function of correcting in the blood that flows from the kidneys, the fluidity of that liquid, impoverished by the loss which the secretion of urine causes. *Tauvry* thinks they serve for almost the same use with the membrana adiposa; straining out a liquor, which by its long stay, becomes oily, then throws it into the veins, whereby the blood, stripped of its fluidity by the secretion of its serous parts recovers its former state, &c. so that they do the same office to the blood of the cava, that the omentum does to that of the porta.—These are probably sufficient, I shall therefore only further mention *Morgagni's* opinion, or rather conjecture, for as such does he offer it, viz. that probably a humour filtered into the cavities, fitted to fill the receptaculum chyli and thoracic duct whilst the infant remained in utero, a time in which these parts receive no chyle from the intestines.

The opinion of Molinetti, which I most cheerfully credit him with, is in my estimation, so very superior to all the above crude and indigested notions, that I shall say no more on the subject. Morgagni's is the only one, I should regard in the least plausible; and I think, had he ascribed to the, (so called,) thymus gland, those functions thus given to the renal capsules, that he would have probably been correct in such an opinion; an opinion I believe not before taken of that organ, but which a frequent reflection on the subject has led me occasionally to adopt, although I am far from laying any stress upon it, and consider it, (as Morgagni did his views of the uses of the capsules,) more in the light of conjecture, than as being founded on any fact of sufficient importance to give it the character of truth, further, than the apparent necessity of some fluid passing through the thoracic duct and receptaculum chyli, in order to keep them pervious for their important office after birth. By an accidental reference to Horner's Anatomy, I think the position assumed of the functions of the capsules is considerably strengthened. In a note, the doctor mentions the presence of this body, in a case of deficiency of the kidney.

ART. III. *Case of Paruria Erratica, or Uroplania.*[*] By SALMON A. ARNOLD, M. D. of Providence, R. I.

MARIA BRENTON, aged 27 years, of sound constitution, generally enjoyed good health until June, 1820, when she was afflicted with a suppression of the catamenia, accompanied with hæmoptysis. The medical attendants, irregular practitioners, bled her profusely every other day, and after the system had become greatly debilitated, injudiciously administered emetics, the operation of which was succeeded by a prolapsus uteri, and a total inability to perform the function of urinary excretion. In this state she continued for nearly two years and a half without any alleviation of the disease, though for the most part of the time under the care of respectable physicians. The urine had been drawn off by the catheter, generally every twenty-four hours, but when this was neglected, she often perspired very profusely about the lumbar region.

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[*] Some account of this very singular case, has been published in a Journal of limited circulation.

In September, 1822, soon after I first saw her, the bladder not having been emptied by the catheter for seventy-two hours, the urine found an outlet by the *right ear*, oozing drop by drop, and continued for several hours after the bladder had been emptied. The next day, at five o'clock, P. M. the discharge from the ear again commenced and continued about as long as on the preceding, but a larger quantity was poured out. The fluid was thrown on a heated shovel, and gave out the odour so peculiar to urine, indicating the presence of urea. The discharge was repeated daily for several days, oozing out guttatim, commencing earlier, increasing in quantity, and being discharged in less time; then twice a day, at three and seven o'clock, P. M. varying but very little for some days; then three times a day, at two, nine, and eleven o'clock, P. M. and continuing subsequently four times a day, at ten o'clock, A. M. and four, eight, and eleven o'clock, P. M. increasing gradually in quantity, and being discharged in less time, until a pint was discharged in fifteen minutes in a stream about the size of a crow quill; then becoming more irregular, being discharged every four hours, and increasing in quantity, until eighty ounces were discharged in twenty-four hours. The discharge from the ear was accompanied by a severe pain over the right eye and about the right ear, with a distressing sensation of fulness. The pain commenced early in the morning, and continued to increase in violence until after the discharge from the ear, by which it was relieved.

When the urine was not discharged at the usual period, or much diminished in quantity, the pain and distress were most excruciating, producing delirium, during which confinement was frequently necessary to prevent her from doing violence to her head. Sometimes a deficiency in the discharge would produce delirium, apparently without much pain; she would then laugh, sing, and converse very incoherently, though frequently with an unusual degree of wit and humour. At other times she would be seized with violent spasms, resembling opisthotonos; and after continuing in this situation for a few minutes, the muscles becoming relaxed, she would heave a deep sigh, and then swoon, and remain in an insensible state for about half an hour, when she would sob, perhaps open her eyes, and after repeatedly sighing would again become insensible. In this condition she would frequently remain for more than twelve hours in succession. Sometimes the spasms would be unaccompanied with swooning; at one time her jaws were firmly closed for twenty-four hours, so that it was impossible to force them open, and at another time they continued closed for more than three days. The swooning would frequently be unaccompanied with spasm, and she would continue insensible for more than twenty-four hours, the pulse imperceptible at the wrist, and respiration only perceptible by the nicest observation. The sight of the right eye was soon destroyed, and frequently that of the left was so impaired that she could not distinguish any object across the room, but the latter is now entirely restored. The hearing of the right ear is much impaired, she cannot distinguish sounds with it, and there is a constant confused noise heard by her like the roaring of a distant water-fall. For a short time previous to the discharge from the ear, there is a very audible noise, resembling that produced by water slowly dropping into a vessel, which may be heard at the distance of several feet. She has no power, excepting by an inclined position of the head, over the discharge, previously to which there is a painful sensation of fulness and a burning heat about the right ear. The next outlet the urine found was by the left ear, a few moments previous to which discharge, a noise is heard similar to that noticed in the right ear: she cannot hear distinctly for ten or fifteen minutes before and after the urine passes off. This discharge is very irregular, sometimes three or four times a week and then is discontinued for months. Soon after the discharge from the left ear, the urine found another outlet by the *left eye*, which commenced weeping in the morning and continued for several hours, producing considerable inflammation. It continued three days and then ceased; a sufficient quantity of the fluid was saved to test its properties; in which, as well as in appearance it did not differ from the discharge from the ear.

In the summer of 1824, it recommenced and continued daily for about six weeks. An account of the quantity of this discharge may be found in the appendix.

On the 10th of March, 1823, urine began to be discharged in great quantities from the *stomach*, unmixed with its contents. The greatest quantity was generally discharged in the morning before taking food, but it was frequently discharged soon after food had been taken, with which it was often entirely unmixed. This discharge has been more regular than from the left ear and eyes, but less so than from the other outlets.

On the 21st of April, the *right breast* became tense and swollen, with considerable pain, and evidently contained a fluid, a few drops of which oozed from the nipple. The swelling and pain continued about twenty-four hours, and then entirely ceased for about a week, when it again returned, and there was discharged a light yellow fluid resembling urine. On the 29th, one ounce was caught in a nipple shell, which, by analysis, was found to contain urea. This discharge has been very regular up to this time. Urine has been discharged occasionally from the left breast, an account of which may be found in the appendix.

November 20th, 1823, the urine from the breast became milky, having the appearance of milk considerably diluted with water; this continued until December 12th, when it gradually resumed its usual colour.

May 10th, 1823, the abdomen about the hypogastric and umbilical region became violently and spasmodically contracted into hard lumps, and a sharp pain was felt shooting up from the bladder to the umbilicus, around which there was a severe twisting pain; in a few days subsequently a loud noise was heard, similar to that produced by drawing a cork from a bottle, and immediately afterwards urine spirted out from *the navel*, as from a fountain. This discharge has since continued, and has rarely been interrupted for many days. Nature wearied in her irregularities made her last effort, which completed the phenomena of this case, and established a discharge of urine from *the nose*. This discharge commenced on the 30th of July, 1823, oozing in the morning guttatim and increasing in quantity every day until it ran off in a considerable stream. It continued daily for about two months, when it ceased until the summer of 1824, and then again commenced, and continued almost daily for some months, since when, it has entirely ceased. All the fluids discharged were found by analysis to contain urea.

The following is the analysis of the fluid discharged from the right ear, made in New Haven, under the direction of Professor Silliman: "Alkaline sulphates were indicated by muriate of barytes and acetic acid; muriates were detected by nitrate and acetate of silver, and by nitrate of mercury; phosphates were ascertained to exist by the addition of caustic, ammonia, and lime water. Urea was obtained in the usual manner, by evaporating the fluid, and redissolving in alcohol, and again evaporating." The urine discharged from the ear was, during the first six months, hotter than that from the bladder, producing by its heat pain in the external ear. The urine from the bladder turned black when not drawn off at the usual period, and deposited a sediment resembling black sand. Sometimes after this black sediment was precipitated, the fluid would be of a dingy yellow colour, at other times it would be as black as ink. The urine from the bladder was frequently of a very high colour before it turned black, but often turned black when it was as perfectly limpid as spring water, and on several occasions it has been noticed that when it was most limpid the largest quantity of black sediment was precipitated.

The discharges from the other outlets have, occasionally, all turned black; a more particular account of which may be found in the appendix. They differ, however, in one respect from the discharge from the bladder, since from the bladder it has never come off black, while it has from all the other outlets. This changing of colours in all the discharges from the different outlets, at the same time, is a most convincing proof of the identity of the fluids discharged.

Since the obstruction of the catamenia, there has been a discharge of blood supposed to be vicarious: it has generally come on every five or eight weeks, sometimes at the regular period. For the first two years there was a discharge of blood, occasionally from the stomach and lungs; from the right and left ear, oftener from the left; from the right and left breast, more frequently from the left; from the navel and from the nose. From the nose and the right ear, it has generally been mixed with urine, nearly three-fourths urine; from the left ear with about equal parts urine and blood; from the stomach and lungs, with the contents of the stomach and the secretions of the fauces; from the left breast and navel it has generally been unmixed with any other fluid. It was frequently fœtid—the colour always dark—it sometimes, though not generally, coagulates. When the urine was not drawn from the bladder for forty-eight hours, or longer, the quantity found in it was always less than when drawn off every twenty-four hours. Sometimes when the urine was not drawn off from the bladder for seventy-two hours, it would be found to contain only one or two ounces. From which I was induced to believe that the discharge from the bladder was almost entirely useless, and that the functions of the system might be performed with very little disturbance, without the excretory office of the bladder. Accordingly I omitted to draw off the urine for seven days, when three ounces only were found in the bladder, during which period, the discharges from all the other outlets were increased, and her health did not appear to have in the least suffered. Both the quantity of fluid drank, and the quantity discharged from all the outlets during the twenty-four hours, was for several days ascertained and the difference found small. When the urine was drawn off from the bladder, two or three times a day, the quantity discharged from all the other outlets, was much decreased, from which I was induced to think that if it should be drawn off every two or three hours, it would be prevented from passing into the system, and being discharged from the other outlets. I therefore introduced an elastic gum catheter, and directed the urine to be drawn off every two hours, but the catheter in half an hour would be filled up with a thick glutinous substance. This was frequently repeated with no better success. Numerous instruments were invented, and when used were all equally unsuccessful. Pessaries of every description and other means to restore the parts to their natural situation, were used, and for a long time continued without any advantage. The quantity of urine discharged from all the outlets was so great, and so much beyond what has been thought possible, that I was apprehensive there might have been some deception—to remove every doubt, I and my friend Dr. Webb, who at my request had occasionally attended her, remained with her four hours alternately, during twenty-four hours, and the quantity discharged during this time was as large as it had been for several days previous to, and after this period. There has never been any doubt that these fluids, which have been proved to be urine, were actually discharged from the ear and the other outlets, since the fact has been proved, day after day, by occular demonstration.

This great disturbance in the system continued to increase for nearly six months, and it was the opinion of all who saw the patient that she could not survive from day to day; after which period it gradually abated, and she is now, when the urine is freely discharged, so much relieved that she is able to walk about her room, and during the summer of 1824, frequently rode out. The discharges from the right ear, the right breast and navel, continue daily, but they are not so great nor so frequent as they were a year since; from the bladder the quantity is as usual; from the stomach, nose, eye, there has for some months been no discharge.

APPENDIX.

A Diary of the Discharges, the appearances and changes in them, together with the most prominent symptoms from the period of the first discharge, until those from all the other outlets were established.

	Bladder.	Right ear.	OBSERVATIONS.
1822.	℥	℥	
Sept. 21	7	4	From the bladder on the 21st turned black, from the ear on the 21st, 22d, and 23d, not measured, but the quantity calculated from wet clothes.
22	16	5	
23	15	7	
24	14	10	Violent pain in the head relieved by a discharge from the ear—pulse 100—skin dry—tongue coated.
25	11	12	Pain increases with sensation of fulness—discharge guttatim—pulse 100.
26	12	13	Pain increases—pulse 100.
27	11	15	Pain very violent—discharge more rapid.
28	12	14	Pain more violent—pulse 120.
29	13	13	Skin dry and hot.
30	12	15	Tongue much coated.
Oct. 1	10	14	Pain more violent—urine from ear very high coloured—discharged in a stream the size of a crow-quill.
2	12	14	Four ounces of urine discharged in five minutes—pain commenced about ten, and increased in violence until five o'clock, when the urine was discharged and head relieved—light extremely painful—can scarcely discern objects with right eye.
3	24	14	Urine by catheter twice—discharge commenced two hours later—in other respects no change.
4	12	13	
5		14	Catheter from unavoidable cause not used.
6	4	17	Catheter used at ten o'clock, after an interval of thirty-six hours, during which thirty-two ounces from ear—and only four ounces from bladder—discharge commenced six hours earlier—from ear and bladder high-coloured—from bladder after standing a few hours turned black.
7	30	15	Catheter used morning and evening—pain in head violent—other symptoms unchanged.
8			Introduced an elastic gum catheter, and directed urine to be drawn off every two or three hours—catheter filled with a thick viscid substance—urine not drawn off every thirty-six hours—complains of urinous taste—face and feet œdematous—urine from bladder turned black as ink, and deposited considerable sediment—pulse 120—symptoms unchanged.
9	16	67	
10			
11	6	24	Witnessed discharge of ten ounces in fifteen minutes.
12	18	33	Commenced guttatim and increased to the size of a crow-quill—from the ear much hotter—higher coloured—urinous odour stronger than from bladder—pulse 120.
13	14	57	Nine ounces discharged in the presence of John Mackie, M. D. and Mr. Webb, student of medicine, in about

	Bladder.	Right ear.	OBSERVATIONS.
1822.	℥	℥	half an hour—commenced oozing gradually, increasing to a stream the size of a crow-quill—produced pain from the heat, in which the thermometer rose to 104, and fell to 94 in that drawn from the bladder—from ear higher coloured and stronger urinous odour than from the bladder—less pain in the head.
Oct. 14	14	43	Discharge from ear, ten o'clock, A. M. usual colour, after standing a few hours turned as dark as pale ink—four P. M. a large discharge, usual colour—in about two hours turned a darker colour than that discharged in the morning—eight P. M. eight ounces discharged in presence of Messrs. Fales and Willard, students of medicine, darker than previous discharge, nearly as black as the black urine from bladder—from bladder turned black after standing a few hours and deposited a sediment resembling black sand—pain and heat in head most excruciating—eyes inflamed—pupils dilated—hearing of right ear impaired—pulse 140—skin dry—tongue coated—very thirsty—drinks freely.
15	13	40	From ear dark coloured—sediment resembling black sand is deposited—proportion of sediment one-third—other symptoms same as yesterday.
16	14	48	From ear muddy, but lighter than yesterday—from bladder turned black upon standing a few hours—pulse 140—in great distress.
17	16	64	From ear turbid, nearly as light as natural—pain in head—eyes a little relieved—from bladder natural colour.
18	12	62	From ear straw colour—from bladder same; vomited six ounces of blood—dark coloured—soon coagulated.
19	20	65	By catheter twice—witnessed discharge of twelve ounces from ear in five minutes, previously to which the bladder was emptied.
20	35	44	By catheter three times—pain in head increases—eyes more painful—is wild and delirious—pulse 140—tongue coated and dry.
21	20	45	From bladder twice—symptoms unchanged.
22	17	64	By catheter twice.
23	16	70	By catheter twice—respiration laborious, other symptoms unchanged.
24	15	48	By catheter twice—respiration more laborious—head more painful—right side is numb previously to discharge from ear, by which relieved.
25	16	63	By catheter twice.
26	15	80	Pain in head relieved—other symptoms same.
27	20	50	Symptoms relieve
28	8	80	
29	16	64	
30	14	50	
31	16	48	
Nov. 1	12	45	
2	16	40	

	Bladder.	Right ear.	OBSERVATIONS.
1822.	℥	℥	
Nov. 3	12	8	Convulsed throughout the day—spasms very violent.
4	6	12	Spasms violent—respiration laborious—palpitation of heart—symptoms indicating hydrothorax.
5	14	10	Spasms and other symptoms continue—pulse 140—skin hot and dry.
6	4	12	
7	16	8	Spasms continue—other symptoms relieved.
8	14	18	Spasms relieved.
9	14		Spasms very violent—pain excruciating—accompanied by sensation of fulness and weight—palpitation.
10	16		Spasms more violent—pain and sensation of fulness continue—respiration laborious—palpitation increases—eyes very painful—pulse 150.
11	15	12	Pain in head relieved.
12	14	10	Less pain in head—difficulty of respiration increases.
13	14		Pain in head more violent, accompanied by delirium.
14	6		Pain in head excruciating—delirium increases.
15	12	16	Pain in head and delirium continue.
16	14	8	
17	15	10	Delirium relieved in some degree after discharge from ear—pain in head and other symptoms continue.
18	12	1	Delirium relieved—spasms increase.
19	14	8	
20	14	24	Spasms relieved—vomited four ounces of blood—dark colour.
21	9	15	From Nov. 21st to Dec. 7th, from unavoidable causes no history of case.
Dec. 7	8		Violent pain in head with sensation of fulness—and burning heat about right ear delirium—skin hot and dry—tongue much coated—pulse 140.
8	10		Pain in head increases—other symptoms continue.
9	20		
10	1		Pain in head excruciating—other symptoms continue.
11	20	16	Pain in head and delirium in some degree relieved.
12	14		Delirium increases—pain in head more violent.
13	16		
14	10	12	Delirium continues—less pain in head.
15	12	8	
			From the 15th to 22d, no discharge from ear—from bladder rather more than usual quantity, not measured—delirium violent—pain in head most excruciating with sensation of fulness—burning heat about right ear—pulse 150—palpitation—skin dry—tongue coated.
22	12	8	Pain in head relieved after discharge from ear—other symptoms same.
23	14	8	
24	10	24	
25	7	8	
26	10		Pain in head more violent.
27	12	4	
			From 27th to 31st of December, no discharge from ear—increased quantity from bladder—increased delirium—violent pain in head—pulse 150.

	Bladder.	Right ear.	OBSERVATIONS.
1823.	℥	℥	
Jan. 1	12	32	Delirium and pain in head relieved—urine from ear coloured with blood—on 3d, catheter not used—on 4th, urine from bladder black.
2	14	32	
3		52	
4	2	50	
5	3	26	Pain—delirium—palpitation—and all the symptoms entirely relieved—pulse 100.
6	8	66	
7	12	60	
8	12	47	
9	8	50	
10	12	6	Pain in head increases—spasm and swooning alternately.
11	8	12	Pain in head relieved—spasm and swooning not so frequent.
12	16	30	
13	12	39	
14	14	25	Urine discharged from left ear—about half an ounce saved—in odour and colour does not differ from discharge from right ear.
15	12	8	Pain in head more violent—swooning frequent—pulse 140.
16	10	8	Swooned ten times—sometimes remains insensible more than an hour.
17	8	12	Pulse 120—swooning not so frequent, nor so long insensible.
18	2	20	
19		12	
20	8	7	Urine from bladder turned black—swooning relieved.
21			Delirium from 21st to 25th so wild and raving as to suffer no one to come near her—on 24th no urine from ear, though the usual sensation of heat and fulness generally felt previously to the discharge—urine discharged from left eye guttatim about two hours in the morning.
22			
23			
24			
25	16	32	From ear when discharged, as black as pale ink—from bladder turned black after two hours—urine continues oozing from eye in morning—pain in head relieved—delirium continues—is very humorous—laughs and sings and talks incoherently—pulse 120.
26	16	32	More rational—swooning returns, succeeded by unusual numbness except in the fingers—pain changes from vertex and over the right eye to back of the head—urine continues weeping from eye—one ounce saved, does not differ from discharge from ear—pulse 120.
27	16	30	After swooning continued insensible for an hour—not the least sensation for several hours excepting about the windpipe—urine from eye ceased—pulse 121—pain in head continues.
28	12	28	Swooning not so frequent, succeeded by numbness of right side.
29	6	32	
30		7	Swooned at ten A. M. and remained insensible until next day at half past ten o'clock, A. M.
31	10	27	From ear turbid—from bladder light inky hue—both turned black—swooning relieved.
Feb. 1	12	24	In evening from ear fourteen ounces in presence of Dr.

	Bladder.	Right ear.	Stomach.	OBSERVATIONS.
1823.	℥	℥	℥	Webb and myself, as black as ink—specimens were sent to Dr. Mitchell, New York, and Dr. Gorham, Boston.
Feb. 2	10	20		From ear colour of pale ink—from bladder turbid and turned black.
3		24		From ear turbid—though no urine from bladder, yet no distention—from left ear six ounces of bloody urine.
4		26		
5		30		
6	14			Violent pain in head—scalp tender and painful.
7	8	16		Head very painful—pulse 140.
8	8	12		
9	16	3		
10	8	4		Pain in head relieved—pulse 100—urine from bladder not measured.
11		32		
12		28		
13		16		
14		17		
15		20		
16		17		
17		21		
18		8		
19		16		
20		18		
21		14		
22		20		
23		18		
24		24		
25		18		
26	12	4		Violent pain and sensation of fulness in head.
27	10	6		Insensible—arousing every three or four hours and immediately swooning—pulse 120.
28	8	11		
Mar. 1	12	15		Swooning relieved—head less painful—pulse 100.
2	12	18		
3	13	17		
4	12	20		
5	14	20		
6	12	20		
7	12	21		
8	14	18		
9		14		
10	8	17	16	Urine from stomach, without much nausea, unmixed with its contents, colour light yellow—from ear same—pulse 100—not much pain.
11		16	18	
12	2		20	From bladder turned back—from stomach light yellow.
13		12	24	From ear deep—from stomach light yellow—discharge from stomach found by analysis to contain urea, and some of the salts found in urine.
14	18			From bladder turned black—pain and sensation of fulness in head.
15		16		Pain continues—urine high coloured.
16	16			From bladder turned black.

	Bladder.	Right ear.	Stomach.	OBSERVATIONS.
1823.	℥	℥	℥	
Mar. 17		6		Spasms commenced at four P. M. and continued until two o'clock, A. M. in the muscles of the jaw, so violent that it was impossible to open the mouth.
18	16	20		Spasms relieved—from bladder black.
19	20	12		
20	18	8	12	Spasms returned.
21	14	16	18	Spasms relieved—from stomach mixed with blood.
22	12	12		
23	14	16		
24	12	18		
25	15	17		
26	12			Violent pain in head and delirium—pulse 120.
27	10	6		Pain and delirium continue—pulse 130.
28		16		
29	16	18	12	From bladder turned black—from other outlets light yellow—pain and delirium relieved—pulse 120.
30		16		
31	10	6	16	From bladder turned black.
Apr. 1	8		16	From stomach black as ink when thrown up.
2	10		8	Violent pain and sensation of fulness in head—delirium—pulse 140—sight of left eye impaired, right entirely destroyed.
3	6	8	16	From stomach and ear turbid, in few hours turned black—sensation of fulness in head—eyes very painful.
4	10	20		Pain in head in some degree relieved—eyes very painful—constant nausea accompanied discharge of urine from stomach.
5	12	16	4	
6	12	12		
7	10	16	18	
8	12	18		
9	20	30		
10	16	27		
11	8	16		
12	12	12	16	
13	7	18		
14			61	From stomach as black as ink when discharged—after which pain in head relieved—constant nausea.
15	6	4		From bladder black.
16	10		40	From stomach black.
17	12	18		Pain in head relieved.
18	8	30	28	From stomach black—from bladder high coloured—turned black in a few hours.
19	20		18	From bladder dark yellow with a reddish cast, turned black after standing a few hours—from stomach light yellow and turned black.
20	16	12	30	From ear usual colour, turned black in six hours—from stomach black—from bladder light straw colour, turned black in four hours—in less pain than she has been since urine was first discharged from ear—pulse 100.
21	20	16	48	From stomach black—from ear and bladder light yellow—from bladder turned black—tension and

	Bladder.	Right ear.	Stomach.	Right breast.	OBSERVATIONS.
1823.	℥	℥	℥	℥	swelling in right breast—few drops of a light yellow fluid oozes out.
Apr. 22	24	10	40		Urine from all outlets regained its natural colour—that from stomach has a very fœtid smell and saline taste.
23	14	8	40		
24	22	12	64		From bladder straw colour—from ear pale black—from stomach came off in two portions—first twenty-eight ounces rather darker than natural—turned black after standing a few hours—the other thirty-six ounces of deep black—when discharged, dull pain in head.
25	16	8	64		From bladder deep orange—ear straw coloured—stomach a very deep black.
26	10	14	36		From bladder straw colour—ear little darker hue—stomach pale black—pain in head and delirium.
27	20	8			From bladder lighter than usual—ear deep orange, approaching to red—delirium continues—swooning—and spasms—pain and tension of right breast—few drops ooze from nipple—pulse 120—incubus.
28	18	15	34		From bladder light straw colour—ear dingy yellow—stomach natural colour—while present she put a thick cloth to her breast, in a few minutes was completely soaked with water, which had the smell of urine—when dropped upon a heated shovel threw off the pungent fumes so peculiar to this secretion, indicating the presence of urea.
29	14	16	46	1	From bladder light yellow—ear straw colour—stomach dirty yellow—breast light yellow.
30	16	16	44	7	From bladder and ear straw colour—stomach dirty yellow—breast partly white, and partly of yellowish cast—patient is rational, and complaining of nothing except a disagreeable sickness occasioned by the rank smell of urine from breast.
May 1	16	17	28	12	From bladder and ear straw colour—stomach dingy yellow—discharged considerable from stomach, and complains of gnawing pain.
2	14	16	50	8	From bladder light yellow—ear and stomach dingy yellow—breast three potions—1st. Reddish—2d. Limpid—3d. Considerably bloody, about the colour of currant wine.
3	8	9	32	18	From bladder light yellow—ear, stomach, and breast straw colour.
4	17	16	52	8	From bladder light yellow—rest dark colour.
5	18	17	57	12	
6	16	16	44	12	
7	17		40	13	
8	17	14	40	8	

	Bladder.	Right ear.	Stomach.	Right Breast.	Navel.	OBSERVATIONS.
1823.	℥	℥	℥	℥	℥	
May 9	17		42	13		From bladder straw colour—stomach black—breast dark yellow—and turned black.
10						From unavoidable cause catheter not used.
11						
12						From bladder deep yellow, and turned black—other outlets deep yellow.
13	6	18	28	6		From bladder light colour—turned black—from other outlets black—all deposited black sediment—feet and legs œdematous—urine begins to be discharged from navel.
14	30	13	42	12	10	From bladder dingy yellow—other outlets black—a small discharge from left ear.
15	14	15	76	10	6	From bladder light coloured—ear, stomach and breast black—navel dirty white—while urine is passing the navel she suffers a painful sensation like that which would be produced by a dagger being thrust into the body.
16	18	13	54	4	24	From bladder lemon yellow—ear and stomach dirty yellow—one portion from navel same as yesterday—others light yellow.
17	16	12		13	30	The whole lemon or yellow colour.
18	20	16			32	Colour same as yesterday.
19	5	11	20	16	22	From ear, stomach, and navel, like dirty water—breast black—bladder light yellow—sixteen ounces discharged from left ear.
20	24	16		7	27	From bladder nearly limpid without sediment—it soon turned black, and deposited a thick sediment—ear and breast light colour—navel high coloured and turned black—patient complains of tension and swelling of left breast—this affection differs from the right breast, being attended with a sensation of coldness—in the right is a fluctuation perceived by striking with the fingers—the left is hard and firm—constriction of chest and a saltish taste, which generally precedes the vicarious discharge from the lungs.
21	18	10		13	16	Colour of all discharges light yellow—six ounces of thick dark coloured blood discharged from left breast in morning—pain and sensation of coldness and tension relieved—in evening, in presence of Dr. Webb, discharged a considerable quantity, which in colour resembled the expressed juice of the phytolacca de-

	Bladder.	Right ear.	Stomach.	Right breast.	Navel.	OBSERVATIONS.
1823.	℥	℥	℥	℥	℥	
						candra, and in smell sulphuretted hydrogen given off by putrid eggs.
May 22	20			9	46	Eighteen ounces discharged from left ear, colour deep yellow—six ounces from left breast tinged with blood.
23	20	17	12	14	60	The left breast continues painful—small discharge of reddish cast—from navel very high colour—from bladder limpid—others light yellow—the greater part discharged in morning previously to drinking.
24						No history of case.
25						
26	12	12	14	8	8	From stomach dark colour.
27		12		8		
28	½	12				From bladder black—ear dark yellow.
29	2			8		Violent pain in head—sensation of swooning—pulse 150—eyes painful.
30	2	12				Symptoms continue.
31	10	16				
June 1	12	16		12		Less pain in head.
2	12	30		8		
3	14	32		6	8	Pain in head and swooning relieved.
4	10	34		6		
5	12	24		6		
6	14	20		8		
7	12	18		7		
8	10	24		9		Eight ounces of urine from left ear mixed with blood.
9	6	20				
10		16				
11	4	18		8		From bladder high coloured—turned black—ear and breast yellow.
12	8	12		8		From the 12th to 25th average quantity from ear twenty ounces—bladder eight ounces—breast six ounces.
						From 25th of June to 2d of July, no discharge from either outlet, though catheter used every day—violent pain in head with sensation of fulness—palpitation—delirium—pulse 150—tongue coated—restless—trembling—swooning.
						From 2d to 20th of July, average quantity from ear eighteen ounces—breast six ounces—bladder five ounces—occasionally discharge from navel.
July 21	4	16		8		Sixteen ounces discharged from left ear—colour as from right.
22	8	28				From right ear mixed with blood—twenty-eight ounces from left ear, light yellow—turned black in three hours.
23	4	18		8	4	From right ear tinged with blood—

	Bladder.	Right ear.	Stomach.	Right breast.	Navel.	Nose.	OBSERVATIONS.
1823.	℥	℥	℥	℥	℥	℥	fourteen ounces from left, light yellow.
July 24	14	16		8	12		From right ear mixed with blood—twelve ounces from left, yellow.
25	16	20		8	8		
26	8	16		7			
27		18		8	16		
28	7	48		12	8		From bladder usual colour—turned black.
29	8						Violent spasms.
30		20			16	6	Discharge of urine from nose—spasms less violent.
31	12	32		8	16	10	From bladder black.
Aug. 1	12	24		8	10	12	
2	16	20		8	12	6	
3	16	16		8		16	
4		12		8		16	
5	12	16	15	8		16	From bladder black.
6	16	18	20	8		17	
7		16	22	16		12	
8	4	14	18	16	10	14	From bladder black.
9		28	17	16	12	13	

The following average is calculated from diaries kept by Messrs. Charles Goodwin and Joseph W. Fearing, (Medical students.)

Average quantity from August, 1823, to June, 1824—from bladder, twelve ounces--from right ear, eighteen ounces—from right breast, fifteen ounces—from navel, twenty ounces—from stomach, nose, eye, left ear, and left breast, the discharges have been so irregular that an average has not been calculated.

The following is an extract from the diary kept during the summer of 1824, by Mr. E. W. Greene, student of medicine, which is annexed to show the quantity daily discharged from the left eye.

	Bladder.	Right ear.	Stomach.	Breast.	Navel.	Nose.	Left eye.	OBSERVATIONS.
1824.	℥	℥	℥	℥	℥	℥	℥	
July 20	16	15		12	13	2	2	Health much improved, and when discharges are regular, free from pain.
21	10	32		36	17	1	1½	
22	16	30		16	10			
23	14	35		20	36	3	3	
24	10	32		8	16	14	13	
25	12	30		16	30	16	6	
26	20	46		16	38	16	8	
27	16	52		16	48	17	6	
28	12	40		17	37	16	8	
29	16	47		5	20	16	8	
30	10	54		16	44	16	5	

Art. IV. *Thoughts on the Pathology and Treatment of Icterus or Jaundice.* By N. Chapman, M. D.

THE origin of the technical title of this disease is somewhat curious. It comes from the Greek Ικτερος, the golden thrush, the colour of the skin in the disease being supposed to resemble the plumage of that bird, and we are told by Pliny, that if the patient looks at the thrush, he is immediately relieved and the bird dies. By the Romans it was denominated *morbus regius*, of which Celsus gives this facetious explanation. Its cure, says he, is to be attempted by exertions of every kind, "lusu, joco, ludis, lacivia, per quæ mens exhilaretur: ob quæ regius morbus dictus videtur." But Pliny tells us it was so called, because those who frequent the courts of kings are most liable to it, which is probable from the voluptuous habits of such society, and which is not wholly irreconcileable with the explanation of Celsus.

The disease approaches in different ways, though as it usually occurs, it is introduced with much languor, inactivity, and depression of spirits, attended by anorexia, head-ache, præcordial uneasiness, considerable disorder of stomach, by flatulence and sour eructations, or nausea, or vomiting, and sometimes cramps, or cholicky pains. These affections so frequently prove the precursors of the disease, that from their existence, its invasion may with some certainty be predicted. The bowels are mostly costive, and when stools are procured they are hard, and of an ash or white colour, indicating the absence of bile. Yet in many instances, there is a profusion of biliary secretion with laxative evacuations. The urine is commonly scanty, and of a deep yellow, or brown, or saffron colour, staining linen dipt in it. There is also a very unpleasant taste of the mouth, with thirst, though the tongue is rarely changed.

As the case advances, the skin, which from the commencement, is dry, and sometimes distressingly itchy, becomes with the adnata variously tinged, the colour appearing first in the eyes, cheeks, neck, and chest, from which points it is progressively spread over the whole superfices of the body. But it is not uniformly diffused. I have seen it restricted to the eyes, and very often embracing only the face. As an anomaly, it is sometimes confined to a longitudinal section of the body. Behrens records a case attended by hemiplegia, where the palsied side was so exclusively icterose, that only one-half of the nose was coloured. Examples, nearly similar, are to be met with in the writings of Valsalva, Etmuller, Dupui, &c. It is most commonly of some modification of yellow, from a pale lemon to the deepest orange or saffron hue. Cases, however, are occasionally presented, in which it is green, or of a darker or lurid colour, called green or black jaundice.

Not much is to be met with in the treatises on the disease, relating to this variety; and indeed, the only precise account of it which I have seen, is in a short essay by the late Dr. BAILLIE, so eminently distinguished by the accuracy of his observations. The substance of what he has communicated on the subject, I shall notice under the several heads of my inquiry. Excepting the difference in the colour of the skin, the symptoms do not essentially vary from those I have detailed. It is said to occur more frequently in the middle and advanced periods of life than at an earlier age, though occasionally it appears in young persons, and oftener in men than women. The progress of the case is also slower, continuing a year or two, or in some instances for many years, and though exempt from violent affections, it steadily pursues its course, till the powers of the constitution are exhausted.

It has happened, however, in some instances, that the three colours have existed in different parts of the same person. LANZONI had a patient whose face was green to the throat, while the right side of the body was black, and the left yellow. The green and black gradually became yellow, the black again resumed its colour, and finally the whole was yellow. But to return to the history of the ordinary form of the disease.

Tenderness of the epigastrium and right hypochondrium is now complained of, and fever more or less intense, ensues—the pulse being full and strong, and sometimes hobbling and even intermittent. Numerous are the cases, however, in which there is little or no fever, or disturbance of the circulation. The head is not unfrequently affected by pain or fulness, and the disorder of vision incident to the disease is proverbial. My allusion is more particularly to all objects being seen of a lurid or yellowish hue, and which was early observed, as appears from the following lines of LUCRETIUS.

"Lurida præterea fiunt, quæquomque tuentur
Arquatei; quia luroris de corpore eorum
Semina multa fluunt, simulacris obvia rerum,
Multaque sunt oculis in eorum denique mixta,
Quæ contage sua palloribus omnia pingunt."

And Shakspeare, no less the poet of nature, declares—

————————"To the jaundiced eye
All things seem yellow."

Nor is medical authority wanting to the same effect, as that of GALEN, SYDENHAM, BOERHAAVE, VAN SWIETEN, HOFFMAN, &c. who assert, that they have occasionally seen it. But long and generally as the notion has been entertained, it is doubted by some, whether there be any foundation for it, and certainly it is by no means a common occurrence. The fact was, I believe, first denied by MERCURIALIS, afterwards by HALLER—and by HEBERDEN we are told, that of all his icteric patients, he had two only who confessed its existence, and their testimony he distrusted. My own experience is decidedly against it. Whenever it takes place, the humours of the eye must be tinged, and such is a very rare event. But in other respects I have seen the vision much affected by dimness, or becoming double or inverted.

Calculi passing through the ducts of the liver, are productive of spasmodic pain in various degrees of intensity, and which is often attended by vomiting so violent that nothing can be retained. The pain, however, is mostly circumscribed to the lower part of the stomach and duodenum, shooting through to the back, though such is sometimes its vehemence, that there is an inability to lie down, and the sufferer, in a sitting posture, is actually drawn double. After a while, relief is afforded, as is usually believed, by the escape of the calculus, which continues for days, or weeks, or months, or even for years—or in short till a second one gets into the same position. Even admitting this explanation as applicable to some cases with such symptoms, it surely cannot be universally received. Many are the instances in which I have known the pain removed by remedies which could have had no tendency to promote the expulsion of a calculus, and under circumstances precluding absolutely the suspicion of its existence. Most probably here it was induced by spasm of the duct or stomach, or duodenum, independently of any calculous irritation, and so analogous are the two affections, that I know hardly any criteria by which they can be discriminated. COE, HEBERDEN, and other writers, however, deny that icterus ever arises from spasm.

What I have hitherto said, relates to the more violent and inveterate shapes of the disease. Every practitioner, however, of much experience, has seen it, and with the deepest tinge of the skin, productive of no constitutional disturbance—the appetite, the pulse, the tongue, the secretory and other discharges, continuing healthy, and so little is the individual affected, that he goes about pursuing his ordinary occupations without detriment or inconvenience.

The career of the disease is very different: sometimes speedily submitting to slight remedies, or the spontaneous efforts of nature, Not a few cases of it, however, prove very indomitable, running on for a length of time, and ending in hydropic effusions, or extreme emaciation with hectic fever, or some cerebral affection, as coma, apoplexy, palsy, or convulsions.

Concerning the remote causes of jaundice, these are many and diversified, or such, at least, have been assigned. Commonly, it is ascribed to the entrance of bile into the circulation, owing to an obstruction of the ducts of the liver, from inspissated bile, or calculi, or spasmodic stricture, or thickening of the lining tissue of the tubes, or heavy hepatic congestions, or by infarctions of the duodenum, or enlarged pancreas, or by pregnancy.

Torpor or paralysis of the ducts, has also been alleged to be a cause, as well as the choaking up of the choledochus by worms. Examples are recorded by BEUTH, LIEUTAUD, and LUDWIG, of lumbrici being found either in the ducts or gall bladder of icteric patients, and a preparation of the liver is in the museum of this university,* illustrative of the same fact, taken from an individual who sunk under protracted sufferings, from hepatitis with jaundice. But it is very often brought on by other circumstances. Certain poisons will induce it according to Galen, who saw "a green colour to take place all over the body of one of the emperor's slaves, from the bite of a viper," which has been subsequently confirmed as to the influence of the virus of that reptile by Fontana—and, I have understood the icteric aspect is a very common effect from the bite of the rattlesnake and some other venomous serpents of this country. Lanzoni tells us, that "he observed an icterus occasioned by the bite of a cat, which lasted forty days," and Van Swieten another by that of a dog. Topical yellowness is a pretty uniform effect of the sting of the bee, wasp, hornet, &c. &c. In two instances of poisoning from arsenic which came under my notice, the skin as well as the serous exhalations in the cavities of the body, was deeply tinged with the hue.

Not unfrequently too, the disease proceeds from mental emotions. Either vehement rage or terror has excited it, and it has resulted from petulance, grief, anxiety, and other irritating or depressing moral influences, conformably to the experience of MORGAGNI, VALSALVA, BEHRENS, TODE, MONRO, DRUMMOND, &c. Excessive grief, from the loss of children, caused it in two ladies whom I attended.

Nothing escaped the comprehensive observation of Shakspeare. The following is the reply of the gay Gratiano to the gloomy moralizings of Antonio in the Merchant of Venice.

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* University of Pennsylvania.

"Let me play the fool,
With mirth and laughter let old wrinkles come;
And let *my liver* rather heat with wine,
Than my heart cool with mortifying groans.
Why should a man, whose blood is warm within,
Sit like his grandsire cut in alabaster?
Sleeps when he wakes? and creeps into *the jaundice*
By being *peevish.*"——

In the tent scene of Troilus and Cressida, Agamemnon is thus made to address his council of lieutenants, who had become despondent at the protraction of the seige of Troy.

"Princes
What *grief* hath set the *jaundice* on your cheeks?
The ample proposition, that hope makes
In all designs begun on earth below,
Fails in the promised largeness: checks and disasters
Grow in the veins of actions highest record;
As knots, by the conflux of meeting sap
Infect the sound pine, and divert his grain
Tortive and errant from his course of growth."

Concussion from the explosion of a bomb in a room, I have learned from an authentic source, once excited it almost instantaneously. Twice I have witnessed it brought on by ingesta, without spasm, or other gastric uneasiness, except nausea and oppression.

Those who are most subject to the disease are, the sedentary, the indolent, and studious, or whose occupations require a curvature of the body, or the dissipated, and particularly the intemperate and debauched. The hysterical and hypochondriacal are exposed to it, and all such as are harassed by the cares, disappointments, or vexations of life. Criminals are said by Haller to be peculiarly liable to it, whether from confinement or mental inquietude, does not clearly appear.

No age or sex escapes the disease. It is incident to infancy, and every subsequent stage of existence. Generally, however, it is met with in those somewhat advanced in life, and more perhaps in males than females, though the difference seems not so great as generally supposed. "Men and women," says Heberden, "are equally liable to this malady: in a continued succession of a hundred patients, I counted fifty-two males, and forty-eight females."

The phenomena of jaundice are so peculiar, that it can hardly be mistaken for any other disease. It is stated by Heberden, "that the most distinguishing signs are a yellowness of the eyes, skin, and urine, and a want of this colour in the stools," which symptoms are selected by Cullen in his definition of it.

Nor need much be said of the prognosis. Most cases of a recent and functional nature are sufficiently medicable, and especially so as respects those of infancy. Being, however, of long standing, and complicated with disorganizations of the liver or other important structures, or in the old and infirm in any respect, they prove generally incurable, or of very slow or doubtful amendment.

Contrary to common opinion, it is asserted by Heberden, that attacks from gall-stones rarely are fatal. Nor according to Burserius, "is there much reason to apprehend danger when occasioned by hysteria, hypochondriasis, or pregnancy, as it quickly ceases after delivery," in which latter remark I cannot concur, having witnessed in several instances very opposite results. It has already been mentioned on the authority of Baillie, that where the tinge is lurid or green, though the case may be protracted, recoveries seldom take place. Melæna, or the purging or vomiting of dark grumous blood is usually a mortal occurrence, and emaciation with hectic fever, or dropsical effusion, or any heavy cerebral affection, as profound coma, apoplexy, palsy, or convulsions, imports either immediate or remote danger.

We may generally prognosticate favourably where, with improvement in the appearance of the surface, there is a subsidence of gastric disorder, more natural fæces, and heavy deposits in the urine. Certain evacuations, as hæmorrhage from the nose or rectum, or by perspiration, or from the kidneys, or bowels, are reputed to be critical, promptly resolving the disease in some cases.

The appearances on dissection, from the history of the remote causes of the disease which has been given, must of course vary much. The liver in certain cases exhibits great diversity of structural derangement, while in other instances it is slightly or not at all affected. In the green jaundice, Baillie affirms, "that the liver is often enlarged, hard, and tuberculated throughout its whole substance, though this morbid change of structure is sometimes confined to a single part of it, and occasionally, no induration whatever is discoverable in that viscus." Gall-stones are occasionally found in its ducts as well as its bladder, varying as to number, figure, and size. "Frequently, however," says Burserius, "in icteric bodies, no morbid condition of the liver, no taint of the ductus biliferi, and no biliary calculi are observable." This statement is substantially confirmed by Heberden. The stomach and duodenum very often betray marks of phlogosis or its consequences, by thickening or other changes of tissue. For the most part, the qualities of the bile, cystic and hepatic, are altered in colour and consistency. It has, to use the language of Good, "been met with acid, acrid, saltish, insipid, whitish, black, green, eruginous, and versi coloured—as dense and dark as elder rob, as tenacious and limpid as the white of eggs, and as crowded and granular as the spawn of frogs."

In very violent and lingering attacks, every part of the interior of the body is tinged of the same hue as the skin. The pericardium, the heart, the abdominal viscera, the blood-vessels, the meninges and substance of the brain, the fat, the cartilages, and even the bones, have been observed in this state. Excepting the milk, all the secreted fluids, as the perspiration, the saliva, the sputum, the semen, the serous exhalations into the cavities, &c. are also found discoloured. These statements are made on the authority of Bartholine, Lieutaud, Morgagni, Van Swieten, Storke, Haller, Burserius, Heberden, Powell, &c.

What is the proximate cause or true pathology of jaundice seems not determined. As before intimated, it has generally been ascribed to the absorption, more especially of cystic bile into the circulation, from some obstruction to its passage into the duodenum. That it does not depend on this cause exclusively, is shown by a case reported by Richter, where the disease occurred in an individual, who, after death, was found destitute of a gall-bladder—and scarcely less conclusive is the result of an experiment by Portal, in which he tied the cystic duct of an animal without producing jaundice. I have long entertained doubts, whether it could be assigned, under any circumstances, to either species of bile. It appears to me, 1. That, were it owing to this cause, the disease might at any time occur, or whenever there is bile exposed to the action of the lacteals or other absorbents, as when accumulated in the stomach and small intestines: 2. That though the stools usually indicate a want of bile, this is not uniformly so: 3. That in many instances of the disease, no obstruction existed on a *post mortem* examination in the ducts of the liver, or any other derangement to account for it: 4. That the peculiar bitter taste of bile is not discernable in any of the fluids: 5. That the disease sometimes comes on too suddenly, as in the instance of the concussion of a bomb, or from violent paroxysms of rage, to suppose it to be owing to absorption.

To these arguments it may be added, that in this disease there is very rarely any genuine bile formed. The fluid, discoverable on dissection, as well hepatic as cystic, has scarcely any such properties as to taste, colour, or consistency. It is a peculiar one, the result of a morbid secretory action, caused by the condition in which the liver is placed.

Even admitting that absorption takes place, as is contended for, the tinge imparted to the skin, should then be of a correspondent colour, and not of the various shades of yellow which happens. But such a process no more goes on in this case than in retention of urine. The bile must be taken up from the pori biliarii or hepatic or cystic ducts, or gall-bladder, which is contrary to all analogy and fact. Does it ever happen in relation to the urine under such circumstances? Conceding that genuine urine has been discharged from the stomach and other remote parts of the body, of which some instances are reported, they supply no evidence of its absorption. These parts have assumed a vicarious office as we have frequent occasion to witness with regard to menstruation.

Embarrassed by these difficulties, some of the advocates of the hypothesis, which ascribes jaundice to bile, have so far changed their ground, as to allege the greater probability of its being introduced into the blood by *regurgitation*, or lacteal absorption. As to the first of these suppositions, its absurdity is so obvious, that it has received a very slender support, and in relation to the second, experience refutes it. By Powell, a recent and authoritative writer on the subject, we are informed that the *disease* "*never accompanies those cases of immense secretion of bile*, which are called cholera, at least I have never seen it in very violent ones, nor do I know any author who mentions it, even as an accidental symptom, and if it had happened, it could not possibly have been overlooked. Bianchi," continues he, "gives a case where this circumstance was more narrowly investigated, for he examined the lacteals of a man who had died of cholera, and found that their contents were not in the least tinged by bile." Let me repeat that there is no absorption of bile. The secretory function of the liver in jaundice, so far as concerns the healthy exercise of it is suspended, as in bilious or malignant fever, and the earliest manifestation of recovery, is the restoration of its office.

Considered as no longer tenable, these views are now abandoned by the best pathologists, and a very early notion is revived, which supposes, that the phenomenon is owing to the liver being altered in its structure or functions, and the materials of bile in the blood consequently not being separated. But can there be a looser speculation, or a greater absurdity? The elements of bile, are not bile itself, which is a peculiar fluid, the product only of the secretory action of the liver, and can never exist till the blood is subjected to this process.

Denying, therefore, altogether these several hypotheses, I am led to believe, that in some undefined irritation of the chylopoietic viscera, arising from any of the remote causes formerly enumerated, with which the capillaries sympathising, the serum of these vessels undergoes a morbid change, as in yellow fever, and in certain cases of poisoning, &c. The same discolouration which occurs in a part, from a bruise, happens in all these instances, and is equally referrible to the torpor or impaired vitality of the extreme vessels. The capillaries being in this languid state, no matter how it may be induced, are disposed to form a fluid of some shade of yellow or its combinations, thus tinting the surface, &c. We meet with it in the cachexies, &c. It sometimes happens in the diseases of the spleen—I have seen it as an attendant on gastric or enteritic epilepsy, and very conspicuously in the chlorotic affections, where the complexion exhibits all the gradations of hues from the icterose to the green and lived. As strongly is it illustrated in the cutaneous efflorescences, especially when of a weak or typhoid character. Cases of rubeola, scarlatina, and erysipelas have repeatedly come under my care, followed by this sallowness. But the most striking proof is offered in some of the early eruptions of infancy. These, at first florid, on the weakening of the vessels, gradually assume the sallow hue. The act of death is often productive of the same effect. It is indeed a very common occurrence, however pallid before, for the corpse to become all over yellow. But it may be asked, does not jaundice also tinge the internal structure of the body? Be it admitted, and what can be deduced from it? Does it not often occur, where it cannot possibly be imputed to bile? Moreover, are not the capillaries distributed through every part, the most minute and obscure recesses of the animal machine, and as the cutaneous, so are the rest affected?

Considerations, such as I have presented, seem to demonstrate that jaundice is not owing to the absorption of bile, and we are left, as I conceive, to seek for the cause of it, in that state of the extreme vessels which has been described. The parent irritation of the chylopoietic viscera, which is very commonly, I suspect, in the mucous tissue of the stomach or duodenum, and not the liver, is extended to the capillaries, and in consequence of the condition thus induced, changes are wrought in the serous fluid circulating through them, characteristic of the icteric affections. Complexional hues being bestowed in this manner in various other cases, why should it not also happen in jaundice? That the closest similarity exists in the whole of these affections is undeniable, and it remains for those who are opposed to the views I have endeavoured to sustain, to point out the peculiar and distinctive character of jaundice.

It is sufficiently apparent, from the preceding account of jaundice, that the prospect of effecting a cure, cannot be the same in the different cases—and, to be appropriate, our remedies must be varied, according to circumstances. The remote and not the proximate cause of it, we are called upon to remove in many instances, and from the diversity of circumstances by which it is induced, there can be no uniform or consistent plan of management adopted. Nor is this the only difficulty to be encountered. Cases dependent on the most opposite conditions, and exacting quite a different curative process, are so obscurely designated, as to elude all the powers of discrimination. It is on these accounts, that our practice is nearly always tentative, and I fear, too often degenerates even into absolute empiricism.

In the ordinary forms of the disease, where little fever or local pain exists, we commence the treatment with evacuations of the primæ viæ, and emetics are especially useful.

Cathartics are also important, so much so, indeed, as to constitute a very essential, and, not unfrequently, the only remedies. Beginning with active purging by calomel alone, or with its ordinary adjuncts, the bowels are subsequently to be kept in a soluble state, by magnesia, the neutral salts, or other gentle laxatives.

These two classes of remedies operate probably on nearly the same principle, removing causes of gastric or intestinal irritation, and by exciting the liver sympathetically, through the strong impression made on the alimentary canal. In proof of the beneficial tendency of purging in particular, it may be repeated that jaundice is often cured by the spontaneous occurrence of diarrhœa.

The case I have presented, one of the simplest of the disease, is comparatively easy of cure. But it wears a more complicated aspect, and demands a different course of proceeding. Coming on with fever, or a strong, full pulse, and topical uneasiness, venesection must be practised, and to some extent, to remove such a condition of the system. Greatly may it be aided by topical bleeding, which is too much neglected. The stomach, the duodenum, and the liver, are here all involved in irritation, congestion, or phlogosis. By a detraction of a few ounces of blood from the epigastric or right hypochondriac region, according to the indication, I have seen signal advantage to result, and, where the means of local bleeding cannot be had, blistering may be substituted. Not less are these measures required in those distractions of the head, which sometimes prevail for days, and relief not being afforded, prove one of the most afflictive attendants on the case.

What, however, calls for the most vigorous proceedings, is a relentless obstruction of the biliary ducts, from a calculus or the spasm of these, or of the stomach, &c. inducing the intense suffering formerly noticed.

The indication here is two-fold, to induce relaxation of the duct, &c. so as to overcome the impediment, and to obviate inflammation, which would follow were obstruction or the spasm to continue. To meet these views, we resort to copious venesection, sometimes even *ad deliquum* —to the warm bath—topical fomentations, and to bleeding by cups or leeches—to vesication—to anodyne enemata and emetics. With regard to the latter, their use must necessarily be precarious and doubtful, to the expulsion of calculi.

These are found of various sizes, from that of a small granule to a hen's egg. It is obvious, that when the stone is so great as not to pass through the duct, vomiting must be mischievous—and it is utterly impossible to ascertain its dimensions. All that we can do is to be governed by the symptoms. Much pain, fever, and general excitement existing, emetics are to be avoided.

Being relieved of this urgent affection, the case next calls for the means which are supposed by many to have the power of dissolving or otherwise destroying biliary concretions. But I believe they operate on no such principle, and it is not easy to explain their efficacy. Be their modus operandi as it may, experience has taught that some of them are useful. Ether and the spirit of turpentine mixed, had once a high reputation under such circumstances, though now little, or not at all employed. Ever having done good, I suspect it was by their carminative or antispasmodic powers, and not from any efficacy as a solvent or deobstruent. Combinations of the alkalies, in the mild as well as the caustic state, have also long claimed, and perhaps justly, much attention. They are variously administered, though the ordinary shape is that of *Castile soap.* Equal portions of it, rhubarb and aloes, with or without calomel, I have often known to be effectual. The common potash mixture, prepared agreeably to the annexed formula, is likewise serviceable in a table-spoonful dose, occasionally.[*] But incomparably the best preparation which I have ever tried, is the following popular nostrum.[†]

Many articles, which must act in a very different mode from these alkaline remedies are entitled to confidence. The acids, mineral as well as vegetable are among these, and especially the nitric, which is by some highly estimated. Cider or even lemonade I have known to be serviceable.

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[*] ℞. Potassæ Carbonas—Gum Arab. āā ʒj.—Tinct. Theb. gtt. xxx.—Ol. Menth. gtt. x.—Aq. Font. ℥iv.

[†] ℞. Carbonas Potassæ, ℥j.—Sapon. Hispan.—Gum Arab. āā ℥ss.—Alcohol dilut. ℔.—To be frequently stirred, so that the ingredients may be well mixed and dissolved, which will require several days. The dose is half a wine-glassful, to be taken for three successive mornings fasting, and, if not relieved, omit it for one day, and then recur to the same mode.

As a general rule, however, the treatment consists principally in keeping up a pretty constant impression on the primæ viæ by purgatives, with which view the pill or the syrup of the butter-nut is well entitled to notice.*

Next, where the case does not give way, an alterative course of mercury should be resorted to, and this failing, the nitro-muriatic acid, exhibited internally, as well as applied externally by frictions, or as a bath, may be tried. It is at this juncture, that the taraxacum, the dandelion of our fields, has been much trusted to by some practitioners.

Directly the reverse, however, of this plan of management, is recommended, consisting alone in the narcotics, as cicuta, hyosciamus, belladonna, the prussic acid, &c. To alleviate spasmodic pain, or to quiet irritation, I give opiates, and for no other purpose resort to narcotics, believing that these are the only purposes which they are capable of fulfilling at this stage of the disease.

Of the icteric cases, dependent on disorganized conditions of the liver, I shall here say nothing. Being merely effects of another disease, the cure can only be accomplished by its removal, to point out the treatment of which, is alien to my present design. Little more, therefore, remains to suggest as to the management of icterus, than that advantage is sometimes derived from the use of those mineral waters, which are found appropriate to the other hepatic derangements. Even a journey to the Springs, and particularly when taken on horseback, is occasionally useful, not probably, as is generally imagined, so much by dislodging calculi, as invigorating the primæ viæ, or the secretory action of the liver. It is on the same principle that electricity and galvanism have been applied to the cure of these cases.

Too much, however, is usually done in the treatment of this disease. As long as the sallowness of the surface endures, it is thought by many practitioners, and always by the patient, that there is occasion for the continuance of active remedies. But this colour of the skin, merely an effect over which we have little control, when unconnected with constitutional disturbance may be disregarded, or left to the natural or recuperative powers to remove. From an opposite course, harassing the system, and especially the primæ viæ by such measures, I have certainly seen a very serious derangement of health induced, and in some instances permanently entailed.

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* The Juglans Cathartica of Michaux.

Convalescence is more effectually promoted by a duly regulated regimen, very similar to that in dyspepsia, and should the stomach suffer, by the moderate use of the vegetable bitters, or mineral tonics and particularly the mildest of the martial preparations, so united with rhubarb as to obviate costiveness. An oppression in the region of the duodenum, is not unfrequently felt an hour or more after a meal, owing perhaps to an accumulation of food from torpor of that intestine, to relieve which nothing answers so well as a couple of ounces of the infusion of senna and gentian, in the proportion of half an ounce of the former, to a drachm of the latter, in a pint of water.

As to the more inveterate forms of the disease, the green or black jaundice, it is confessed by Baillie, the highest authority on the subject, and which seems to correspond with common experience, that they are nearly intractable, no permanent, salutary impression being made on them by any ascertained means.

Mercury has very little influence. "The kind of induration," he tells us, "which attends the disease, is not affected by it in the same manner as those indurations of the liver usually are which sometimes accompany yellow jaundice. Mercury, however, will sometimes alleviate, for a time the uncomfortable feelings of the patient, and induce him to think that he is getting better, without inducing any substantial benefit. The daily use of neutral salts in small doses, has appeared occasionally to have been of some advantage: but of all the cases of green jaundice which have fallen under my notice, I recollect two only which recovered."

An icterose predisposition being established, and which is generally laid by an attack of any severity, speedy relapses, or more remote recurrences of the disease, are very apt to take place. To guard against these is an important consideration, as the constitution thus repeatedly assailed, becomes disordered, and ultimately a train of morbid consequences arises of the most fatal import. It will be well studiously to avoid all the exciting causes, and which are chiefly embraced in want of attention to the bowels, inappropriate clothing, indiscretions in diet, exposure to the fluctuations of weather, inordinate exercises, or the reverse, habits of indolence, the indulgence of intemperate passions, or the cherishing of anxieties, or cankering cares. This is a prophylactic precept, which should always be inculcated, and strictly observed.

ART. V. *Observations on the Medical Topography and Endemic Fever of Montgomery County, Alabama.* By CHARLES S. LUCAS, M. D. of Alabama.

THE county of Montgomery lies principally on the east side of the Alabama river, and includes within its northern and eastern boundaries a small portion of country between the Coosa and Talipoosa, which, by their confluence, form the Alabama river. This great stream originates in the mountains of the northern part of the state, and after a devious course, generally tending to the southwest, of more than a thousand miles, terminates in Mobile Bay, the great commercial outlet of the state.

The general aspect of the country is flat or level, but may naturally be considered in three portions. The first is that part bordering the river, which, from its lowness and fertility, is most valuable, and which is also most liable to disease, on account of being frequently inundated. These lands are peculiarly adapted to the cultivation of cotton and corn, the staples of the country, and when uncultivated, are clothed with most luxuriant growths of spontaneous vegetation.

The fertility of the soil is well shown in the stately and majestic appearance of the forest trees, which attain a size far exceeding that produced in other situations. For several miles from the river the surface of the earth is covered with thick cane brakes, apparently impenetrable except to the wild beasts.

Much time and labour are requisite for the clearing of these lands. The large trees are first girdled, and then the cane and undergrowth cut down. The vast number of trees thus destroyed, and the rapidity of their decomposition from the moisture and warmth of the atmosphere, must largely contribute to the causes of disease; but still more abundant sources of pestilent miasmata exist. Owing to the soft alluvial soil through which the Alabama flows, the course of the river is frequently changed, and the channels once occupied, remain filled with water, after the stream has diminished and receded within its banks. The sluggish and frequently stagnant waters of these lagoons, exposed to the intense and continued action of a scorching sun, are soon covered with a green scum, are the nidus of myriads of insects, and the surrounding atmosphere speedily becomes offensively tainted. Into the numerous small ponds the negroes are in the habit of throwing the decayed timbers removed from the cultivated land, and in no long time, a compound for the production of miasma is formed, which could scarcely be excelled by human ingenuity.

It will readily be believed that a residence during summer and autumn in such a vicinity, must be attended with great loss of health and risk of life. This experience has amply proved true, although some individuals whose constitutions have gradually become accustomed to this atmosphere do reside in such situations. Such persons, though not frequently attacked with the mortal diseases, so destructive to those who are accustomed to a pure air, nevertheless exhibit proofs of the baneful influence of the miasms in their mental debility and premature old age. The ability the negroes possess of resisting the heat of the sun, is not less remarkable than the constitutional peculiarities which enable them to bear more corporeal labour than the whites. They reside during the intense heat of summer in the most sickly situations, with the utmost perfect impunity, while the whites are obliged to retire in order to avoid the deleterious influence of the miasms.

At a distance of three or four miles from the river, we arrive at what is termed upland, or oak and hickory land, as this timber is there the most abundant. This soil, though not so productive as that we have just mentioned, is generally very fertile, and it is on this section of land that some of the most beautiful and highly cultivated plantations are situated. The deep vegetable mould which forms the soil, rests principally upon a stratum of red clay, which is very hard and mingled with pebbles bearing a considerable resemblance to pudding stone. The heavy rains which fall in winter soon wash away the superincumbent earth, wherever the surface is irregular, and expose a barren space, altogether unfit for cultivation.

The remoteness of this portion of land from the river, and its comparative dryness, render it less liable to the obstinate bilious fever common to the inhabitants of the river lands. Yet, bilious fevers of a very malignant character have prevailed here to a very alarming extent within a few summers past.

The third division of country, is that known by the name of prairie land, situated in the south western part of the county. They form one of the most striking features, not only of this section of Alabama, but also of a large part of the southern and western territory of the United States. They begin near the eastern boundary of this state, and extend without much intermission westward, towards the southern extremity of the rocky mountains. The surface for miles in extent is covered with a rich verdure, and strike the spectator with their strong resemblance to the meadows and grazing fields of a highly cultivated country. These plains vary from a few acres to a thousand or more in size, separated from each other by thin glades of wood;

not forming a dead level as is commonly supposed, but a succession of gentle risings and depressions, which have obtained for this the title of rolling land.

The soil is of a peculiar character, and extremely fertile, producing cotton in greater abundance, in favourable seasons, than the richest river land. There is a kind of shell limestone found at the depth of a few feet, which, unlike the limestone of Kentucky and Tennessee, is generally of a soft consistence and adhesive nature. The difficulty of obtaining good water, for drinking, &c. renders the prairie land objectionable as a place of residence; though in point of salubriousness, the prairie lands are not surpassed by the other parts of the state. This, among other causes, may be attributed to the comparative absence of animal and vegetable putrefaction, and the nature of the soil, which absorbs moisture so rapidly as speedily to become dry after the heaviest rains.

Climate.—The rainy season generally begins in the month of February, and with various intermissions continues until the middle of May. The water-courses overflow during the spring months. The highest flood which has been observed within the last fifty years, was that of April, 1822. From the hilly and unequal nature of the country through which the Alabama flows, the waters are collected with astonishing rapidity, and the river in the spring of the year frequently rises twenty or twenty-five feet within a few hours, inundating a vast number of fields. Lands subject to be thus overflowed, whatever may be their fertility, are comparatively of little value for the purposes of agriculture.

The summer usually commences about the first of May, and continues until the last of September; showers are generally frequent and profuse during this season. The summers of 1825–6 were generally dry, to which circumstance may be partly attributed the increase of disease during the last two years. During the summer the days are intensely hot from eleven until three o'clock; the thermometer ranging from 85 to 100° Fahr.* The nights are cool, and the atmosphere peculiarly loaded with moisture, so that when riding at night the hat and hair soon become wet.

The winter season is very variable, frequently changing from cold to warm, sometimes causing a thermometrical difference of twenty degrees in a few hours. Nevertheless, the inhabitants seldom suffer from inflammatory affections, such as pleurisy, pneumonia, or rheumatism. Catarrhal affections are sometimes prevalent, and when neglected lead to phthisis: the latter disease is very rare.

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* In the year 1823, the coldest weather ever remarked by the settlers, occurred in the month of February. The thermometer was as low as seven degrees above zero: this severe frost killed all the orange, fig, and olive trees in the lower part of the state.

The white population of the county are principally emigrants from Georgia, North and South Carolina, and a few New Englanders. Most of them are sufficiently well off, not to be under the necessity of labouring for their own support; and many of them are provided with every comfort that wealth can procure. The slave population is very considerable; and in general, slaves are humanely treated, being well fed, clothed, and lodged.

Strangers or unacclimated persons generally suffer during the sickly season, which may be said to commence in June and continue until towards the middle of October. Those who have resided in the country for a few years, resist the heat of summer very well and are less liable to the prevailing fever than transient visitors. So powerful is the influence of the climate on those unaccustomed to it, that slaves who have lived several years in the state, are sold at a higher price than those brought from Maryland and Virginia.

The inhabitants of the river lands consider themselves as comparatively safe, if the rains are frequent and sufficient to keep the stagnant pools or lagoons well filled. To the residents on the oak and hickory lands, the same cause is productive of most fatal consequences. A great extent of cultivated land, very frequently manured with cotton-seed, is exposed to the scorching rays of the sun, after having been sufficiently moistened to allow of the most rapid decomposition of the vegetable matter. The air becomes loaded with the noxious exhalations and the injury to the health of the inhabitants is severe.

For the first two or three years after the settlement of Montgomery county, there was little or no sickness observed; but since the lands have been rapidly cleared of timber, fevers of a formidable type have become prevalent.

Taking into consideration the peculiar fertility of the soil, and the rapid and luxuriant growth of vegetable productions, the general mildness of temperature in the winter and the powerful heat of the summer; the extensive surfaces of stagnant water teeming with every material suited to the process of speedy decomposition, we cannot be at a loss to account for the fevers, which so frequently occur in the summers, with desolating force.

The fevers of Montgomery may be considered as forming two varieties, which may be termed inflammatory and congestive.

The inflammatory form of fever was preceded by the following symptoms; chilliness of the surface, extending down the back; in some cases the coolness was so light as only to be discoverable at the ends of the nose, fingers, and toes, while other parts of the body were preternaturally hot. Patients complained of great heat and suffocation, when the surface was cold and the heat only perceptible at certain points. The loins, knees, and large joints generally were very painful; head-ache, nausea and disposition to vomit, a small, quick, and variable pulse, with hurried respiration, were the symptoms of the first stage.

In the second stage the heat of the surface augmented considerably, the pulse was increased, full and unyielding; the face flushed, the conjunctiva red, excessive head-ache, tongue parched, and frequently delirium was present. The secretions were altered in character, and diminished in quantity, and the bowels were necessarily torpid. The excited stage being fully developed would continue for several hours, and even days, when a slight abatement would take place, about the same hour that the chill occurred on the preceding day. Sometimes no remission took place until the third day; in others the remission was so slight as scarcely to be discovered. The disease advancing, the symptoms become aggravated; the greatest distress, accompanied with much exhaustion occurred, and this violence terminated about the fifth, seventh, ninth, or eleventh day. Where the crisis is favourable, the pulse becomes soft, the skin and tongue moist, all the secretions more abundant, thirst diminished, respiration freer, and sleep natural. An unfavourable termination is indicated by the pulse becoming quicker, the respiration frequent, feeble and anxious, the tongue dark, brown, or black, and all the symptoms indicating the immediate proximity of dissolution.

The congestive form of this fever was not of such frequent occurrence as the inflammatory, but was altogether more formidable and fatal. The duration of the attack varied according to circumstances: the fatal termination speedily followed a violent accession, unless speedily relieved by energetic treatment. The symptoms were very deceptive; cases sometimes terminated in death before danger was apprehended, not occupying more than twenty-four or thirty-six hours in their whole course. The patient was generally affected with great depression of all the animal and organic actions; a slight, scarcely distinguishable chill, laborious respiration, sense of weight and oppression at the præcordia. great pain in the head, pulse frequent, low, struggling, indolent, and occasionally intermitting, where the brain was affected. The heat of the surface was partial or circumscribed; the tongue, which at first was but slightly changed, as the disease advances becomes dark and almost black; the bowels were torpid, and loaded with dark fæcal matters. The sensibility of the skin was almost entirely lost; epispastics produced no effect. The muscular system was without power, and the mind prostrated. Stupor, delirium, convulsions, hiccup, involuntary discharges, with blotches, and gangrene of the extremities, marked the last periods of the disease.

The duration of this form of fever was various according to the violence of the attack, and the amount of congestion. In both varieties of the epidemic the functions of the liver, kidneys and skin were always in great disorder. Sometimes there was a redundant secretion of bile and urine, and at others both secretions were suspended. In some instances which fell under my observation the skin was thoroughly jaundiced, it was almost always dry and husky. Local affections were very generally complicated with the fever in the first variety of the disease. The spleen and lungs were seldom attacked with inflammation, but were during the first stage always considerably engorged. But the organs principally affected by the congestion were the liver and brain, the functions of which were so much interrupted or impaired as to be productive of the most alarming consequences.

The treatment resorted to during the cold stage, was such as appeared suited to shorten its duration, consisting chiefly of warm diluting drinks, warm bath, occasionally warm toddy and stimulating applications to the extremities. As soon as the system fairly reacted the use of the lancet was decidedly called for and the effect was always beneficial. But when the reaction was imperfect and feeble, the most injurious results would have ensued upon the same treatment. When the heat of surface was considerable, with head-ache and full pulse accompanied with much thirst, bleeding always proved of great advantage, and cathartic medicines subsequently operated much more efficiently.

Purgatives conjoined with local bleeding according to circumstances, were of great importance where the reaction was imperfect. When the heat of the surface was unequal, the senses impaired, and the secretions suspended with a slight disposition to vomit, no medicine was so efficacious as tartar emetic and ipecacuanha, in full doses, aided by warm bath. The temperature of the body would become equable, the secretory organs would resume their offices, and a copious discharge of bilious matter by vomiting, would leave the patient comparatively free from uneasiness, perspiring freely and disposed to sleep.

Emetics used with discrimination, had more influence in producing reaction than any other remedies that I have used, but in cases where great gastric irritability existed, they would probably have proved fatal. In these latter cases the nausea was promptly relieved by blisters. As co-operating to the same end, the saline mixture, soda water, lime water and milk, porter, infusion of columba, mint water and laudanum, and laudanum administered as an enema, were highly useful.

In all cases where general excitement quickly succeeded the use of an emetic, and the other means above noticed, blood-letting should always be premised before the administration of purgatives. Of this latter class, the mild ones proved most beneficial. When the liver was involved in the diseased action, I generally used calomel, and followed it up with the different saline purgatives, alone or combined with senna, or the castor oil; their action should be promoted by enemata, these remove the torpidity of the bowels, and are sufficiently active to evacuate the contents of the bowels, which are dark and tar-like.

Drastic purgatives were inadmissible; watery, and frequently bloody discharges, and great exhaustion following this exhibition. Whenever the secretion of bile is produced by the action of purgatives, the fever, pain, thirst, oppression and restlessness soon abates, and the other secretions being restored, the disease speedily yields. It is often useful to unite with the laxatives, the antimonials, in order to relax the cutaneous surface. Diuretics and sudorifics, as spiritus mindereri and laudanum, James's powder, spiritus nitr. dulc., nitrate of potash, serpentaria tea, warm drinks, as toast and water, lemonade, tamarind water, &c. were given to allay thirst, and keep up the discharge from the surface. If there existed any derangement in the cutaneous system, as partial perspiration; sponging the body with tepid vinegar and water, was beneficial by increasing the discharge from the skin. When the excitement is high, skin hot and dry, and great thirst; cold acid drinks, and sponging the body with cold vinegar and water, proved a valuable auxiliary in subduing arterial action.

Tonics.—Wine and bark, sulphate of quinine in porter, columba and gentian tea, quassia and orange peel, are tonics of great efficacy in preventing the recurrence of a paroxysm of fever, and preserving from relapses. When circumstances would admit it a removal from a low damp situation to a more elevated one, conduced very much to speedy recovery.

Diet, during convalescence, light and nutritious; exercise moderate: recovery usually followed in eight or ten days.

Art. VI. *Clinical Reports of Cases treated in the Infirmary of the Alms-House of the City and County of Philadelphia.* By Samuel Jackson, M. D. one of the attending Physicians.

HOSPITAL clinical reports have of late been received with much favour by the medical profession. They are justly regarded as presenting facts, on the accuracy of which implicit reliance may generally be placed. The cases reported have been witnessed by numerous students, the records of the symptoms, of the attending circumstances, and the treatment, have been kept by persons, (the students of the house,) uninterested in the propagation of particular doctrines, or plans of treatment, who are not committed in their opinion, and who have no motive to exaggerate the symptoms, to conceal errors, or otherwise to deviate from perfect exactness in the particulars they daily enter in their journals.

In hospital practice the effects of particular remedies, and plans of treatment, when accurate ward books are kept, are more certainly to be determined than in private practice. A large number of individuals in the same diseases, are rapidly brought under view, experience is concentrated in a short period, and the general result can be ascertained by tabular statements. The patients are, besides, more absolutely subjected to the disposition of the practitioner; he is not embarrassed by the contrariness, the whims and prejudices of the sick; his ordinances are superintended by intelligent students, and executed by vigilant nurses. The facility and number of post mortem examinations, serve to test the correctness of the diagnosis of each case, to correct mistakes, and to ascertain with precision, the nature of the organic lesions, that have given rise to each train of symptoms. These are the circumstances that impart to hospital practice and experience its great value, and has caused it, at all times, to be regarded as furnishing the most important and precious information on practical details, as well as shedding a flood of light on pathological science.

The Alms-house Infirmary of this city is one of the best clinical schools in this country, from the number of patients brought into its medical and surgical wards, and the immense variety of the diseases that afflict human nature constantly to be found within its walls. The number of annual admissions into the Alms-house average above four thousand, and of those into the Infirmary over three thousand.

It has been a source of deep regret to those aware of the value of the experience of this institution, that it should have been of so little avail to the public. It is one of the methods, and of no little worth, in which it might compensate the expense of its maintenance. A laxity of discipline and want of system prevails in the infirmary department that is distressing and perplexing. The medical board possess no authority, and the responsibility of the students, apothecaries and nurses, being to the board of managers, who meet once a week, who are fully occupied with the mass of business brought before them in relation to the other departments, and who can seldom hear of any delinquencies, except by complaints made to them from the medical attendants, and which will never be done except in flagrant offences, it becomes impossible to enforce a rigid performance of the duties of the house.

The frequent changes in the board of managers, who are annually elected, and of students, who are appointed for a year, are subversive of wholesome order and systematic arrangement. The first, just as they begin to understand the character of the establishment, its wants, the principles of its government, and could prove of the highest utility, mostly retire from the office of manager, and are succeeded by others, devoid of their experience, who often enter upon the duties of their appointment with erroneous ideas of its nature, filled with prejudices and prepossessions, of which they require time and some observation and reflection to be disabused. The last, after having been drilled into their duties, are about becoming useful to the institution, and capable of executing with propriety all that is required of them, find their time is expired, and are replaced by new ones who are inexperienced, and require, on the part of the medical attendants, the same wearisome process of watching them, and urging to the performance of duties they have not the authority to enforce.

The above statement will explain the absence of all medical records in the Infirmary of the Alms-house. This institution has possessed the materials for giving complete histories of different epidemics that have prevailed in the city and suburbs, from the numbers of patients carried into it, as well as of epidemics that have existed in its wards, that would have proved of the highest interest and importance to the profession; but not the slightest trace of them is to be found in any records or documents of the institution. All its experience in this respect, as well as of the vast number of most important cases of disease has perished.

An attempt is now making to remedy this most grievous evil, and it is fully calculated, that by the assistance of the intelligent and zealous resident students at this time in the institution, the medical board will succeed in obtaining regular hospital records and case books to be kept in each ward. I propose to furnish, for the future numbers of this Journal, clinical reports derived from these sources, during the period of my attendance on the infirmary or hospital of the Alms-house. In the mean time, I shall offer for the present number, a statement of the cases of continued fever, that were brought during last winter into the clinical wards, under the direction of Professor CHAPMAN and myself, with the details of some of the cases, illustrating the general plan of treatment pursued, the notes of which were kept and have been furnished to me, by the gentlemen then attached to the wards as resident students.

With the intention of exhibiting the kind of patients who are the subjects of the treatment in this hospital, it will be proper to give a general account of this institution. The Alms-house of this city, includes under the same roof, an infirmary or hospital for medical and surgical cases, a poor-house for the indigent, and a work-house for vagabonds. This last circumstance gives to it somewhat of a disreputable character, and few who have remains of a sense of decency and self-respect, and desire to be esteemed respectable, will seek refuge in its wards, unless compelled by absolute necessity. The majority of the patients are individuals of the very lowest order of society, many of them the victims of the grossest habits of depravity, and nearly all suffering more or less from intemperance. A large proportion of the diseases are chronic in character, the consequences of the abuse of ardent spirits, of exposure to the inclemencies of the season, of deficient or improper alimentation, &c. Acute diseases are rarely seen in the first week, more usually they are not brought into the house until the second, or third, or fourth week from the commencement, and it is very seldom the patient has not, from his habits, more or less affected the integrity of his constitution. It frequently happens, that the patient on admission, both in acute and chronic diseases, has advanced into the last stage, is absolutely in a hopeless condition, disorganization of some of the tissues or organs has taken place, and often he is in articulo mortis. It is a common practice, but which merits severe reprehension, to send patients, as soon as they are despaired of, into the Alms-house, there to die; and it has frequently happened that they have expired on the way, or before they could be got into a ward. It has been an occurrence in one week, for three patients to be sent from an institution of this city into the Alms-house, of whom one died in the yard, another on the staircase, and the third in half an hour after being placed in a bed. The Alms-house infirmary can be regarded as little better than a hospital of the incurable and the dying. It is uncommon for a week to pass without the admission of patients in the last extremity. This statement is made to show the difficulties that are encountered in the practice of this institution, and that the mortality of the house is not to be considered as a fair standard of the deaths, that occur under the courses of treatment adopted by the medical attendants.

Some observations on the general modes of treating diseases—methodi medendi—may be requisite, to give an understanding of the principles on which some of the cases that will be reported, have been managed.

There are three general plans or modes of treating diseases; the expectant—medicina expectans, the active or perturbating—medicina agens et perturbens, and the physiological—medicina physiologica.

The first, or the treatment of diseases by expectation, was the method of the philosophic Greek sects, and was that pursued and highly recommended by HIPPOCRATES, whence it has been named the Hippocratic method. The followers of this system consider the laws of the economy of man, or nature, as capable, to a great extent, of correcting the deviations of the natural actions, in which consist diseases, and restoring them to their normal condition. They thus recognise recuperative powers in the constitution or the whole of the organism, that tend to its conservation, and which give a disposition, if not interfered with, in the greater number of individuals and in most acute diseases, to a favourable issue. They believe these powers to be sufficient, in most instances, to the cure of diseases. Diseases, also, especially the acute, when left to nature, have been observed, at all times, to pass through successive periods of gradual development, of increase, of highest degree of intensity, of decline and convalescence. A solution is frequently effected by some of the secretions, as by urine, or sweat, or a purging, &c. or by a metastasis, when the disease is said to be judged, or determined by a crisis. From the extent of observations of this kind, made by the first spirits of the profession in every age, it cannot be denied, that most acute diseases have a spontaneous tendency to a cure, which is accomplished by the sole resources of the animal economy. These resources are more evidently displayed, and may be more relied on, in proportion as the patient has a sound constitution, is of mature age, and has not abused his organs, by gross violations of the rules of hygiene, in his habits of life. Acting on those principles and views, the expectant practitioner is a careful and cautious observer of disease; he contents himself with removing the causes that have produced it; he defends his patient from the lædentia, or whatever can injuriously affect him; he avoids troubling the spontaneous efforts of nature, by imprudent and ill-timed proceedings; and seconds them by a careful and intelligent application of hygienic means, both of a physical and moral character.

The expectant method has received the sanction and commanded the approbation of the most enlightened and highly gifted medical philosophers of every period. It was the system of the Greek physicians, from which it has been known as the *Greek medicine*—it met the approbation of the instructed CELSUS, as the following sentence shows, multi magni morbi curantur abstinentiâ et quiete; it was advocated by ALBERTI, in his dissertation De cura per expectationem, and by CAMPER in a treatise, De optimâ agendi vel expectandi in medicinâ ratione; it was defended by STAHL in his work, Ars sanandi cum expectatione; it was adopted and enforced by HOFFMAN, in various tracts—De optimâ naturæ morbis medendi methodo—De medicina simplicissima et optima, motu, inedia, aquæ potu—De inedia magnorum morborum remedio; it is sustained and illustrated by PINEL in his Médecine clinique, and his Nosographie Philosophique. In fact, the expectant treatment has been for three centuries almost the exclusive practice of the French physicians. This circumstance arose from the great vogue the Hippocratic writings have possessed in France, and the purity of the medical profession of that country from all connexion with the trade of medicines, and the branch of pharmacy, which inevitably leads to the degradation of the science, and to abuses in practice.

It cannot be disputed by the most prejudiced, that expectation in medicine is a practice perfectly rational, that it is based on the laws of the organism, that it is fully adequate in most simple, inflammatory and febrile affections, to carry the patient with certainty and safety to a happy result. But, in diseases invading the system with great force, extending to numerous organs, crippling and disabling them in their functions, so as to prevent them from affording to each other a salutary aid, occasioning irregular and anomalous phenomena, breaking up the usual courses of diseases, and prostrating all the recuperative energies of the economy, expectation would prove, what it has been denounced to be, a study of death. In those cases, art must interfere with its salutary processes, and bring to discomfited and fainting nature, the succours of its powerful and renovating means—when they are wielded by an exercised hand and directed by intelligence and skill.

The Homœopathic practice of HAHNEMAN, that begins to count so many followers in Germany, is nothing more than pure expectation. So inveterate and deep-rooted are preconceived notions and prejudices, that, accustomed to regard medicines as the only means of combating and curing diseases, the homœopathics attribute in their treatment every favourable tendency or change, to the undoubted effect of a millionth, billionth, and even quadrillionth part of a drop of the tinctures of bark, of digitalis, of cicuta, &c. rather than to any conservative actions of the system itself. It seems never to enter the thoughts of many physicians, that the all-wise Deity in forming the admirable "piece of work, a man," the most complex and refined of mechanisms, exposed to innumerable morbific causes internal and external, constantly subjected to a vast variety of aggressions, calculated to disturb the harmony of its actions, to disorder its functions, and to disorganize its structure, should have left it without any inherent powers for its conservation and protection. Without the aid of doctors or physic, those powers are now, as they were before either existed, perfectly adequate to the removal of many diseases, and to maintain the integrity of the vital forces from morbid lesions.

The active, disturbing or perturbating system, is directly opposed to the expectant. The practitioner who acts on this plan, lays aside the character and conduct, that Baglivi, in the opening sentence of his Praxeos Medicæ, so justly and beautifully attributes to a physician—medicus naturæ minister et interpres, quicquid meditetur et faciat, si naturæ non obtemperat, naturæ non imperat. On the contrary, nature is disclaimed as an auxiliary, and her efforts are regarded as more mischievous than beneficial. To use the language of the late Professor Rush, in his lectures, nature, when the physician enters the sick room, is to be turned out of doors, as a noisy cat creating a disturbance. In acting on the disturbing method of treatment, the object is to cut short the disease at once, as some express it, and the most energetic means are had recourse to. "The kingdom of heaven suffereth violence, and the violent take it by force," Matt. ii. 12. is a text adapted to this school. The heroic remedies are exhibited with a lavish hand—a ceaseless and restless activity in prescribing and administering medicines prevails—every organ is called into action, every function is disturbed, every emunctory is attempted to be forced, to expel through it the disease. Bleeding, vomiting, purging, sweating, urination, salivation, expectoration, stimulation, rapidly succeed each other, and not unfrequently are attempted all at one time; remedies become every thing; they are regarded as omnipotent: nature, the conservative powers of the system, are sunk into nothing, their sanative influence is unknown, or superciliously treated with contempt; though happily for the patient, those despised powers, often triumph over the disease, physic, and the doctor, combined to his injury. The heroic remedies are in the highest degree perturbating in their actions, they possess a degree of activity not inferior to any, and superior to most of the morbid causes by which diseases are generated. They are agents from whose administration, if ill-timed, improperly selected, or to which a wrong direction is imparted, the most disastrous results may ensue. Their employment requires in the prescriber the greatest caution, extensive theoretical and practical knowledge of his profession, and consummate skill.

The active or disturbing plan of treatment should be followed with a wise reserve. Its energies are not to be displayed on every occasion, but brought to bear on those cases only, in which the implication of most of the important organs in the diseased action, the denaturalization of their functions, the suspension of the natural secretions, leave few healthy organs to resist diseased organs, and of the sympathies of healthy actions to counteract those of morbid actions, and, consequently, no rational expectation can be entertained, that the system is capable of its own protection. It is under such circumstances that active medicine is to be adopted, and the auxiliary aid it brings to nature oppressed and sinking in the struggle, often ensures a victory, when it would have been doubtful, or when defeat without its succour, was inevitable.

Active medicine is, however, too often empirical in character. Remedies are clothed with supposititious specific properties, that are ticketed against particular affections or symptoms. For fevers, there are febrifuges—for coughs, expectorants—for debility, (that little understood and much abused phrase,) tonics and stimulants—for the profluvia, astringents and absorbents—for convulsions, antispasmodics —for amenorrhœa, emenagogues—for dropsies, diuretics and hydragogues—and for all diseases the panacea mercury. Prescribed on principles like the above, the effects of remedies cannot be relied on. The same train of symptoms arises from causes the most opposite, belong to diseased conditions of organs exceedingly different, and requires an intelligent discrimination to decide on their character, and the means they indicate to be employed. Nothing besides is less demonstrated, than the specific effects of remedies; nothing less certain than a power to produce their denominative remedial results; nothing is more positive than that they frequently aggravate the very condition they are administered to remove. Remedies, then, are only to be considered, in reference to their mode of influencing the organic actions, both of the surfaces to which they are applied, and remote points, and the relationship between this influence and the existing state of the organic actions. On no other principles can they be usefully, safely, and satisfactorily prescribed.

The active or disturbing medicine, and to a great extent of fearful activity and empirical character, prevails in Great Britain; and deriving our science from that country, is common in the United States. The character of the English science has been affected by the vicious organization of the medical profession. Two-thirds of the practice of medicine in Great Britain, has been for some centuries, in the hands of apothecaries. This circumstance originated from a decision of the house of lords in an appeal from the court of king's bench, in the case of the college of physicians against Rose, an apothecary, who had been prosecuted for an infringement of the statutes in prescribing medicine for the sick. The judgment against Rose was reversed, and by this most famous decision of the hereditary legislators and judges, the English apothecaries were authorised to prescribe and administer medicine to the sick, at the same time they were prohibited from charging for advice as physicians. The remuneration of the English apothecaries for their attendance, is derived from the physic the patient swallows, and the more they can get down him, the better is their pay. Should rest and a diet, with diluent drinks for a day or two be all that would be requisite, as it so frequently is, in the treatment, it is clear, the apothecary could not live by advising it; he must prescribe a draught, or a pill, or a julep, or some physic, to be remunerated for his services, and ten to one, if an active medicine be given, but a patient is made, who pays pretty well before he is done with the services of his attendant. The earlier English apothecaries, were for a long period, a very different class from the present intelligent and well educated men of whom they are composed. They were illiterate and ill-informed; they were not regarded in a respectable light; and something reproachful attached to the name. Their practice was necessarily empirical, consisted in a blind and confident reliance on medicines and specifics, to the entire disregard of regimen, whose salutary and efficient resources were wholly unknown and unattended to. Philosophical medicine, and an observation of nature; the study of the laws of the organism, the direction and modification of which, is the aim of the enlightened and truly scientific practitioner, could have no existence in a profession constituted on the principles of the English apothecary or general practitioner. The great mass of the medical profession of England being of this description, confounding departments that are different and should always be kept separate, uniting a trade to the science, and pharmacy to the practice of medicine, has imparted an unhappy influence to English medicine. It retains much of Arabism in its character, the distinguishing features of which were polypharmacy and an absolute confidence in pretended specifics. We still see in English medicine, the interminable search after new remedies, new medicines, new formulæ, to be continued with unabated ardour, as though the materia medica was not overloaded and clogged with the weight that has been heaped upon it; as though practice had not sufficiently demonstrated that the abundance of a pharmacy, is a certain proof of its inefficacy, and the number of certain remedies for a disease the evidence of their inutility; as though millions of experiments and two thousand years of experience, without the discovery of a single specific or absolute remedy for a disease, was not sufficient to demonstrate the utter futility of the expectation. It is time that this delusion of medicine, like the idle reverie of early philosophy—the philosopher's stone, should be consigned to oblivion.

Physiological medicine is of modern date, and, in its improved and rational character, BROUSSAIS is entitled to be regarded as its founder. The establishment of a system of medicine on physiological principles, is not a novelty. It has been frequently attempted. The system of the late respected Professor RUSH, was a physiological system of medicine, but physiology was, then, in a very different condition from what it is at the present day. Analytical anatomy had not made known, at least in this country, the true structure of the human frame; the doctrine of the membranes or tissues, which forms an epoch in medicine, was unknown in England or America, and both countries were equally ignorant of the General Anatomy of BICHAT, a work that Professor Chapman has pronounced in his lectures to be a revelation in medicine. It was impossible that a physiological doctrine of medicine could have done more in that state of the science, than have made approaches to the truth—perfection was not within the reach of human genius. That Dr. Rush failed, is no more than was to be expected, and offers no impeachment to the clearness of his intellect, the vigour of his reasoning faculties, or the soundness of his judgment; it is justly to be ascribed to the deficiencies of our anatomical and physiological science, in the elementary materials from which the principles of his system were to be derived. The general principles, however, of Dr. Rush, with some exceptions, corrected by the doctrines of general anatomy, will be found to approach to the leading principles of the physiological medicine of Broussais, and to confirm their correctness.

The pathological doctrines inculcated from the practical chair of the University of Pennsylvania, for some years past, by the present professor of the theory and practice, have, in many points, a strong similarity with those of the celebrated French reformer. From the deficiency of our physiology, from which science all sound and extensive views in pathology must be derived, he has, however, laboured under the same disadvantages that have embarrassed all the attempts, heretofore, made in the accomplishment of an entire physiological system.

Physiological medicine takes for its basis the structure of the human system, the healthy actions, and the laws that govern them. The human system is a complicated animal mechanism. It consists of numerous organs, each having peculiar functions; these organs are arranged into apparatus for the performance of certain offices; each organ is itself a compound, resolvable into elements called tissues or membranes, each tissue having a peculiar nature, actions and functions.

The organs and several apparatus of organs are of different importance in the scale of vitality; some only affect life remotely and indirectly, others immediately: they have different degrees of relationship to each other; some are so closely connected as to have a mutual and immediate dependance; with others the connexion is not as close, and in some of inferior grade, barely exists. The organs and apparatus are connected in two ways. The one depending on the functions as more or less essential to the actions of each. The other arising from the communication of impressions and actions made on one to another, which is through sympathy. The last differs in the organs in intensity and extent. It is most lively and most extensive in the most important organs.

All impressions made on the organs must be received by its tissues. Every impression produces some change or modification in the action of the tissue to which it is applied; and every change of action must be accompanied by change of structure. Disease then, the result of abnormal impressions, is a change in the action and structure of the tissue of an organ.

Disease is always local in its commencement, but other organs, by sympathy, partake in the diseased condition. The important organs, as having the most numerous and most active sympathies, are either primarily or secondarily affected in most diseases.

Diseases being deviations from the natural actions and structure of particular tissues, are always local, never general. All the tissues and organs are never found to be at one time in a morbid condition. The greater the number of local lesions, and the more important the organs, the more difficult is the restoration to health. Diseases being thus local, different parts or organs of the system may, at the same time, be in the most opposite condition, and require a different treatment directed to each.

From the above general outline of the principles of physiological medicine, it will be seen that every case of disease presents to the practitioner the following problem for solution.

Certain symptoms existing, to determine the organs and the tissues in a state of lesion:

The morbid organs and tissues being ascertained, to determine the nature of the lesions in each:

The morbid organs and tissues, and the nature of the lesions being determined, what are the hygienic means and therapeutic agents, whose modes of action on the tissues, whose physiological effects, will enable the practitioner to combat those legions, in the most direct and speedy manner, and with safety to the patient.

Such is the problem every physiological pathologists feels himself bound to decide to his own conviction, before he finds himself at liberty to commence a plan of treatment, the object of which is the active and powerful modification of the laws and actions of life.

Of the general methods of treating diseases, the last is that which commands my preference, and which I enforce in the management of most of the cases that come into my charge. In chronic diseases, that resist the rational plan of cure, I most usually resort to the expectant method, and it is only in a few obscure cases, where the other methods have failed, that the disturbing and empirical is put in requisition. It is with a view to illustrate the physiological practice, so much abused, and so little understood in this country, I propose to make publication of some of the numerous cases subjected to that system of treatment, and the general result.

The Alms-house Infirmary consists of six medical wards, three of which are appropriated to females and three to males. There are besides surgical wards, and cells for lunatics. In the spring, summer, and autumn, when the clinical class does not exceed fifty or sixty, the students accompany the prescriber through the wards, and clinical observations are made at the bed-side. In the winter, when the class amounts from one hundred and eighty to two hundred, the most interesting and important cases are collected in the clinical wards, connected with which is a lecture and operating room. In this room the class assembles, and the patients are transported to it in their beds. Here they are examined before the class, the symptoms inquired into, the nature of the disease investigated, with observations by the lecturer on its pathology and treatment.

The medical wards are attended by Drs. Chapman, Mitchell, Hodge, and myself. August, September, and October are the term of my attendance. The *clinique* during the winter months devolves on Professor Chapman, with whom I have been associated in that duty for the last three years.

The regular clinical days in the spring, summer, and autumn months, are Mondays and Thursdays; in the winter, Wednesdays and Saturdays. On those days the class attends on the practice of the house, and clinical observations are delivered on the different cases. The attending physician visits the house on the intermediate days, according to the urgency that may exist, requiring his presence. The senior resident students prescribe during his absence. This explanation is requisite, as the treatment is sometimes commenced by the resident student, and is not always in conformity to the principles of the visiting physician.

CASES.

It is not in my power to give a statement of all the cases that occurred, from the absence of accurate, I may almost say, of any hospital records in the infirmary department. This defect is now remedied to a certain extent, and will enable me to give fuller statements hereafter. I am indebted to Dr. Walton and Mr. Kennedy, resident senior students, for a list of thirty-four cases of continued fever, to which the term typhus is so commonly, but incorrectly given. Of this number seven died, all of whom were excessively intemperate in their habits. To Dr. Walton I am also indebted for the histories of some of the following cases, which he recorded at the time they occurred, in a private case book he kept for his own instruction; a part of them is taken from the clinical ward book, in which some of the cases are recorded.

Case 1st.—*Case of Fever, (extracted from case book of H. Walton,)* —Moses Howard, (black,) aged twenty-three years, was admitted into the Alms-house Infirmary on the evening of the 24th of September, 1826. He had been ill about three weeks. While at work at his trade, that of a blacksmith, he felt overcome with heat, and in this state he swallowed a potatoe, which caused immediate sickness of the stomach. Feeling thirsty, he took a drink of water, which was soon followed by puking, and he threw up what he had eaten at dinner. After vomiting he felt better. At dark he was worse and had nausea. He rested tolerably well through the night. After this he was attacked with rigors every day, followed by fever, which set in at noon and continued through the afternoon and night. Towards morning there was a remission of the febrile paroxysm. For the last three days his fever had been continued, and was attended with delirium.

The symptoms on admission were—pulse quick, without tension—skin hot and dry—tongue foul, covered with a brown crust, except at the edges, dry and rather contracted—lips dry, scaly—teeth fuliginous—eyes heavy; the upper half of the ball more injected than the inferior portion; suffused with tears. He has no appetite whatever—there is tension of the abdominal parietes—complains of pain in the abdomen, increased by pressure over almost every part of it. His head is painful and attended with delirium.

25th. This morning I find him about the same as last evening. He dressed himself and was anxious to go down stairs—his hands are cold—he picks at the bed cloths and has slight subsultus tendinum. I did not disturb him during the night, but commenced the treatment this morning as follows, viz.:—

A blister to be applied to the occiput and back of the neck—bowels to be evacuated by simple injections—feet to be bathed in water as hot as can be endured—diet to consist of preparations of sago—drink to consist of barley water, acidulated.

About eleven o'clock Dr. Jackson saw the patient; at this time the eye balls were highly injected and rolled upwards—skin cold—pulse small and frequent—stupor. In addition to the treatment, four cups were directed to the head, two of which were to be dry, and two with scarifications, also twelve leeches to the epigastrium, followed by warm fomentations to the abdomen, and frictions of terebinthinate decoction of cantharides to the extremities. The leeches were applied in the evening. Blankets wrung out of hot water to his legs.

26th.—Very much improved. His strength has increased. There is reaction with more heat of the skin—a better pulse—no subsultus tendinum—eyes less injected and not turned upwards.

28th.—Better. Treatment consists in frequent application of blankets wrung out of hot water to his extremities. To have to-day a simple injection and a dose of castor oil. The warm fomentations to the abdomen to be continued—injections of cold flaxseed mucilage.

29th.—Improving very fast—the heat of his skin is nearly natural—tongue becoming moist. Diet to-day, to have the addition of chicken water.

30th.—Improving. The warm fomentations are still continued to the abdomen. Bowels kept open by simple injections of flaxseed tea.

October 1st.—Still improving—tongue nearly clean—pulse regular—strength increasing.

2d.—Sitting up this morning, but is ordered to bed, as he is not considered sufficiently recovered to bear exertion. Diet; soup, gruel, &c.—*Evening.* Complains that his bowels are confined. Ordered a simple injection to remove this.

3d.—Sitting up at times—complains yet of debility. Diet; soup, bread, gruel, &c.—drink, barley water. Directed him to drink of the following tonic decoction:—

℞.	Pulv. Cinchon. opt.	℥ss.
	Rad. Colomb.	ʒij.
	Cortex aurant.	ʒi.
	——— cinnamon.	ʒss.

Add to a quart of boiling water—reduce by simmering to three half pints.

7th.—Walking about—fairly convalescent.

23d.—This patient has rather a slow convalescence. This Dr. Jackson ascribes to too great an indulgence in eating meat, &c. He therefore orders him to have nothing but barley water for twenty-four hours. To take also ℥ss. ol. ricini.

November 4th.—Convalescence proceeded rapidly under a more restricted regimen. Discharged cured.

Observations.—This case, at the time it was presented to our notice offered a train of formidable symptoms. I remarked to the clinical class at the time, that it had been customary to combat the condition of the system, which was one of great prostration, with tonics and stimulants, freely administered. But this practice in the Alms-house, having so frequently failed to accomplish the ends that had been looked for, I was discouraged in attempting it in the case then before us. The state of the intellectual faculties, the injected condition of the eye and its tendency to be constantly rolling upwards, with the convulsive twitchings of the muscels, were complete evidence to my mind that the meninges of the brain were the seat of considerable irritation: the dry, brown, parched tongue, the extreme sensibility of the epigastrium, the nausea that had early existed, were equal indications that the intermittent irritation had become fixed, and we had now a gastritis of no slight intensity to contend with. The prostration was, then, the consequence of this condition of the brain and stomach, by which, in the first place, the nervous functions were in a state of lesion, and were maintained in that state by the sympathetic irritation directed on the brain from the stomach; and in the second place, the concentration of irritation in the stomach and small intestines, constituting them a focus of the vital energies and the circulating fluids, at the expense of other organs, was the immediate cause of the diminished actions and enfeebled functions of the skin, of the central organ of the circulation and of the pulmonary system. From this view the indication was to diminish the excess of irritation in the brain and stomach, and operate a revulsion on the surface. Notwithstanding the degree of prostration and apparent debility, I would therefore venture on a direct but moderate local depletion to act on the two points, the seats of the irritation; to allay that of the stomach by cooling and demulcent drinks, while the skin was excited by means of moist heat, by enveloping the half of the body in blankets rung out of water as hot as could be borne, and renewed night and day as soon as they began to cool. This mode of stimulating the skin, when it is intended to produce a revulsion from the brain, I prefer to sinapisms or blisters, when cerebral or meningeal inflammation exists, as pain is a direct and energetic stimulus of the brain and almost every organ, and often aggravates and even excites inflammations in the brain, stomach, &c. The result of the treatment was highly gratifying, especially from the rapidity with which the very formidable symptoms disappeared. It is to be remarked that the convalescence was retarded by the full diet allowed, in the expectation of conferring strength.

Case II.—Ann Riggins, aged thirty, fair complexion, delicate frame, sober habits, admitted into the Alms-House, February 12th, 1826.—She had been sick upwards of three weeks, and was a patient of one of the Dispensaries—after exposure to wet and cold, she had been seized with pains in the back, head, and extremities.—Fever succeeded, and which had continued until her entrance into the house. According to her statement she had taken during her treatment four emetics, a number of powerful purgatives, and nitre powders. A large blister had been applied over the epigastrium, showing that gastric symptoms had existed, and her extremities were also blistered.

At her admission into the ward at twelve o'clock, M. she presented the following symptoms—skin dry and husky, eyes injected, cheeks flushed; tongue dry, hard, cracked, pointed, brown, and crusted; bowels costive, extremities cold, pulse scarcely perceptible, breathing short and difficult, stupour amounting almost to insensibility, great distress evinced on pressing the epigastrium.

The lower half of the body was immediately wrapped in blankets wrung out of warm water, a common house injection was ordered—acidulated barley water for drink.

Evening—skin more natural in temperature and feeling, pulse more developed, coma continues—cups to be applied to temples and back of neck, cold to head, warm fomentations to lower extremities to be continued during the night—same drink.

13*th.*—Is much better—stupor relieved—converses freely and gave the history of her disease and previous treatment—complains of no pain except when she coughs, no pain in head, eyes less injected and face not as much flushed, tongue becoming moist but is furred; feet warm, pulse full and soft, bowels freely opened by injection—continue treatment. Five, P. M. slight increase of fever, with some difficulty of breathing, bowels not moved since morning, injection given at nine P. M.—fever soon after subsided.

14*th.*—Improving—fomentations omitted.

15*th.*—Has return of pain in the head, eyes more injected, tongue brown and dry, pulse feeble, bowels not opened.—The warm fomentations to be renewed, and an enema to be administered. Nine P. M. pain in the head removed, tongue moist, no fever.

16*th.*—Her feelings are better, a disposition to coma exists, the eyes are injected and when sleeping, they roll upwards under the lids half closed—fifty leeches behind the ears, and an irritating revulsive injection of infusion of jalap, ʒi. senna ℥ii. water ℔i.

Evening—bowels opened three times by injection, stools natural colour, head very little relieved, tongue moist but furred.

Sinapisms to ankles, and fomentations to be continued, hair to be removed from the head, and cold constantly applied during the night.

17*th.*—Much better, no disposition to drowsiness, eyes clear, no pain in head, tongue furred but white and moist. Ordered ℥ss. castor oil—sago for diet.

18*th.*—Continues mending, bowels opened by oil, tongue moist, fur cleaning off, no pain in epigastrium or abdomen, pulse and skin natural.

19*th.*—Entered into convalescence, diet increased.

Observations.—Riggins had been subjected to the perturbating practice, employed with great activity, but without the least improvement—it may be said with an aggravation of the symptoms. When she entered the house, her condition was certainly most unfavourable, if not desperate, but a treatment calculated directly to diminish the inflammation existing in the stomach and meninges of the brain, brought about an immediate change, and placed her in safety.

Case III.—Fleshower, aged about thirty-five, an assistant nurse in the women's clinical medical ward. In the fall she had intermittent fever, for which she had entered the house. It was accompanied with violent paroxysms of fever, head-ache, and gastric irritation; she was bled from the arm and put on barley water for sole diet. The intermittent disappeared after the third or fourth day of treatment; she had continued well and was employed as an assistant in the ward, until January 10th, when she was attacked with chill, pains in limbs, followed by intense head-ache with pain in the chest. The bowels were bound; the tongue dry, furred, brown colour; nausea, restlessness, jactitation; epigastrium sensible, pressure occasioning acute pain; thirst ardent, eyes injected with blood; pulse full, frequent, tense; skin hot and dry.

Twelve ounces of blood were taken from the arm, an injection of infus. sennæ was directed, cups to head and epigastrium, blankets dipped in hot water to the legs, cold to the head, acidulated demulcent drinks taken cold.

January 11*th.*—Bowels opened by injection, pain in epigastrium increased, distress of patient greater, all the symptoms more unfavourable. Simple enema to be repeated, and sixty leeches to epigastrium, the leeches were applied at twelve o'clock. Evening—Better in every respect immediately after the application of the leeches, the head-ache, pain in epigastrium, restlessness and distress were dissipated; the skin is now moist, and of natural temperature, tongue moist and soft. The hot fomentations to lower extremities continued; diet, acidulated barley water.

12*th.*—Improving, diet continued.

13*th.*—Still better.

14*th.*—Committed an error of regimen, fever returned; tongue dry, furred; pain in side. Cups were directed to be followed by a blister; not experiencing relief, some hours after V. S. ℥xii.—absolute diet.

15*th.*—Better.

16*th.*—Breathing oppressed, pain returned—V. S. ℥viii.

17*th.*—Better, pain continues, and pulse excited—V. S. ℥x. treatment, absolute diet.

18*th.*—Improving.

19*th.*—Symptoms have all disappeared; increase diet.

20*th*—Convalescent.

Observations.—In this case the patient came under treatment, which rarely happens with the patients of this institution, from the commencement of the disease, and the physiological treatment could be brought into action, against the simple disease not aggravated by the effects of disturbing remedies on the organs. Cups were resorted to in the first instance, to economise the expense of leeching. I have always observed, however, that cups to the epigastrium, when it is very sensible, and pain is acute on pressure, by the pain they occasion, aggravate the symptoms. This case is an instance of the kind. The effects of the leeches in reducing gastric irritation, were most conspicuously displayed in this case. It is also to be remarked, that the cerebral symptoms were immediately relieved on the diminution of the gastric irritation, by the leeching. This circumstances I have repeatedly observed. It is a strong proof, that in fevers the celebral disorder is sympathetic, and this effect may almost certainly be relied on, from local depletion from the epigastrium in fevers, when the continuance of the morbid sympathetic irritation has not become permanent in the brain or its meninges.

On the 14th, pleuritic symptoms were manifested, which easily yielded to a pure, unmixed antiphlogistic treatment.

Case IV. ——— Connor or Forrest, aged forty-two, small stature, dark complexion, was admitted December 24, 1826, from an outward. She had been complaining several days, and some purging medicine had been given to her. Slight fever existed, with cough, for which an expectorant mixture had been prescribed with barley water. I saw her the first time on the 29th. She then complained of sore throat, which was inflamed—the tonsils enlarged—she had fever—delirium—appeared to suffer great pain, moaning loudly, and often screaming—very restless, not keeping one posture five minutes—tongue furred, dry and hard—epigastrium very sensible, and intense pain resulting from pressure—nausea and occasional vomiting. Leeches were directed to be applied to epigastrium—warm poultices of flaxseed and onions around the throat—cloths dipt in tepid infusion of flaxseed to be constantly applied to abdomen—and blankets, wrung out of hot water, to the lower extremities—cups to the head—acidulated barley water.

30th.—A slight amendment—pulse irritated, feeble—tongue dark—teeth fuliginous—the skin continues dry—vapour bath, made by putting hot bricks under the bed clothes, supported on hoops, and pouring on them vinegar and water—delirium and head-ache—the ward is kept disturbed by her moans and screams. Blister to back of neck—frictions with terebinthinate decoction of cantharides to legs.

January 1st.—Better—tongue moist—ideas less confused—temper irritable—jactitation incessant—two beds are placed beside each other, that she may toss herself into them alternately—throat better—pulse small and irritated. Ordered injections.

2d.—Considerable amendment, especially in the cerebral symptoms, which have nearly subsided—temper very irritable. Continue treatment—begins to sleep, and is less noisy.

3d.—Continues to improve—treatment the same.

4th.—Better—sago for diet.

5th.—Gradually improving—tongue moist and soft—skin natural—bowels regular.

6th.—In changing the stoves yesterday, the ward became very cold—a relapse took place in the night—throat sore, with dry tongue. Poultice to throat—vapour bath, with fomentations to extremities and abdomen—acidulated barley water and sago for diet.

7th.—Much better—fomentations and diet continued.

8th and 9th.—Continued to improve.

10th.—Was removed to clinical ward.

11th.—Not as well—took cold by the removal—fever—dry tongue—pain in epigastrium—the former treatment renewed.

12th.—Better—tongue still dry.

13th.—Improving—skin dry.

14th.—Same as yesterday.

15th.—Porter and water—with spiritus mindereri and black drop at night.

16th.—Convalescing.

Observations.—This woman had been an inmate of one of the out-wards for some time—her general health was bad—the skin of an unhealthy hue, and the countenance exhibiting the characters of a person advanced in life.

From these circumstances, and the depressed and enfeebled state of the circulating powers, depletion was very sparingly employed. External revulsives, with absolute diet and demulcent drinks, were alone relied on, and proved fully adequate to the relief of symptoms that assumed for a time a most threatening aspect. I have never seen a patient in whom restlessness was so distressing. The assistants were occupied day and night in removing her from one position to another. This feeling has generally been remarked as one of very unfavourable augury.

Case V.—Catharine Shearer, aged twenty-four, fair complexion, delicate frame, has enjoyed good health—a domestic servant. Three weeks previous to her admission, while menstruating, was exposed to wet and cold. She was attacked with rigors; pain in the head, back, and stomach succeeded, followed by a severe febrile paroxysm that lasted for eight or ten hours. She has had similar paroxysms daily, and the intermissions have not been complete. She has been a patient of the Dispensary, and has been treated with cinchona and other tonics. During her disease she has continued to emaciate, and is now very much reduced in flesh and strength.

November 10th, 1826—She was admitted into the clinical ward, presenting the following symptoms: emaciation, prostration of strength, heaviness and torpor of mind, cheeks flushed, tongue furred but moist, dry troublesome cough, some dyspnœa, pulse frequent without tension, skin hot and dry, bowels open.

Treatment.—ʒii. spiritus mindereri every two hours—warm pediluvium—cold applied to the head—cool acidulated drink.

11*th.*—Fever diminished—nearly a complete remission—exacerbation in afternoon—tongue furred in the centre, moist and clean on the edges—face flushed—pulse frequent—irritated—delirium. Treatment continued.

12*th.*—Better—remission more complete—exacerbation of the afternoon more moderate—less delirium.

13*th.*—Fever returned at eleven A. M.—continued through the day—delirious at night—jactitation—difficult to retain in bed—diarrhœa, discharges watery and yellow.

14*th.*—Improvement—more remission—less exacerbation—pulse firmer and more regular—skin softer and more natural.

15*th.*—Same as yesterday—treatment continued.

16*th.*—Fever as usual. Cold flaxseed decoction to be kept constantly on abdomen. Allowed chicken water.

17*th.*—More of a remission—vomited last night bilious matter—skin softer—pulse firmer. A laxative drink, composed of manna ʒii, crem. tart. ʒi., pruna gallica ℥iv., to a quart of water, was directed.

18*th.*—Rigors this morning of fifteen minutes duration—febrile paroxysm as usual—several alvine discharges.

19*th.*—Chill and fever again to-day—symptoms better—respiration freer and fuller—tongue nearly natural—pulse fuller and less irritated—countenance more animated. Ordered infusion of horehound for occasional drink.

20*th.*—Chill and fever returned, which terminated with sweat—other symptoms improving.

21*st.*—Same as yesterday—the sweat more copious.

22*d.*—Paroxysm as usual. From the repeated occurrence of the febrile paroxysms, while the tongue and appetite indicated the almost entire disappearance of the gastric irritations, the cerebral symptoms having also totally disappeared, Dr. Jackson made a careful examination of the abdomen to ascertain whether some local point of irritation did not exist there. The right iliac region was found to be exquisitely painful on pressure—twenty-five leeches were applied to it in the afternoon.

23*d.*—No return of the chill and paroxysm of fever to-day—the tenderness of the iliac region less—expectoration of mucus—takes a simple cough mixture—horehound tea—acidulated barley water—chicken water—flaxseed decoction to abdomen.

24th.—A slight chill and light fever to-day—feels stronger, and is improving. Treatment the same.

25th.—On the expected period of the chill, gave tinct. thebaic gtt. xx.—no paroxysm to-day—improving in strength.

26th.—Convalescing very fast—is cheerful—a number of furunculi have appeared where the leeches were applied—cough better—free expectoration.

27th and 28th.—Recovering rapidly—diet increased.

Observations.—Shearer, on her admission, had been under a tonic treatment, instituted from the paroxysmal type the disease assumed with her. At that time irritations had become diffused; they were seated in the stomach, the brain, the lungs, and the intestines; they were threatening to assume the chronic state, and the general forces of the system were wasting, with rapid loss of flesh. Active depletion was not admissible, nor was an energetic practice by powerful remedies to be attempted where so many organs were involved, and the prostration of the forces of the system so great. An expectant method was therefore adopted, aided by local means calculated directly to reduce the local morbid excitement of which the different organs were the seat. It is to be observed in this case, that very speedily on the cessation of the stimulant treatment, and by the use of cold applications to the head, and demulcent acidulated drinks taken cold, the brain and stomach were withdrawn from the circle of morbid lesions. Notwithstanding the paroxysmal type continued, and became even better defined, the intermission being more complete. It appeared to be maintained by the irritation of the lungs, and disease in the ileo-cæcal region of the intestines. When fevers assume the chronic state, they are generally maintained by a lurking irritation or inflammation in this last situation, and many of the fatal terminations are the consequence of ulcerations and disorganizations in this portion of the alimentary canal. This will be shown by dissections in a future report. In Shearer's case, the pain produced by pressure on the right iliac region was very acute and elicited from her strong complaints. As soon as the concealed enemy was discovered, it was attacked by leeches, and the amendment was immediate. I am under the impression that cups and a blister were applied to the chest; but they are not on the record.

Case VI.—Sarah Mullin, aged nineteen years, was admitted into the Philadelphia Alms-house Infirmary, on the 7th of November, 1817, when she stated her case as follows, viz.: she had very recently arrived in the United States from Ireland, of which she was a native, in good health.

On the 5th of November, after having exposed herself to wet without shoes, and whilst perspiring freely, she experienced sensations of chilliness, accompanied with pain in the back and head—dyspnœa—oppression about the heart—sickness of the stomach, and violent pains in the abdomen. On the following day an emetic of tart. antim. was exhibited to her, which produced free vomiting, but without relief of her symptoms. A dose of Epsom salts succeeded, and after its operation she felt some relief. At the time of her admission she complained of pain in the head—pain between her shoulders—difficulty of breathing—palpitation of the heart—wandering pain in the extremities, and cramps of the muscles of the legs and feet. Her bowels were free. She was directed to be cupped over the forehead, to have lemonade for her drink, and to make use of hot pediluvia two or three times through the day.

10*th.*—She was transferred to the clinical ward. Still complained of some pain in the head, and some tenderness from pressure over the epigastrium. In the afternoon had a febrile paroxysm—tongue pretty clean—bowels regular—pulse firm—skin inclined to be moist. Treatment continued with the exception of cupping.

12*th.* Better—tongue only slightly furred—pain in the head inconsiderable—pulse regular—some tenderness of the epigastrium remaining. The treatment consists in the exhibition of lemonade and neutral mixture—to use hot pediluvia as a revulsive.

13*th.*—Morning. Improving—tongue broad, moist, only slightly furred—pulse slow and pretty firm—she appears to be convalescent. Afternoon. Complains of pain in the head darting across from one temple to the other. Directed to be cupped—to have sinapisms to her legs, and to have a hot pediluvium.

14*th.*—Improving—tongue nearly clean—pulse slow and soft—skin cool.

From this period she convalesced, her diet was improved, and she was discharged from the institution, in a short time after, cured.

Observations.—The above is a case of simple fever, the result of exposure to cold, while heated and in a free perspiration. The gastric, cerebral, and thoracic organs appeared to be the seat of the irritations that were excited. This case shows the facility with which recent and light affections yield to a simple antiphlogistic plan of treatment.

Case VII.—Margaret Curran, aged twelve years, sandy complexion. Four weeks previous to her attack, had arrived in good health from Ireland. She had been exposed for some days to cold, and after the usual premonitory signs was attacked with fever. She was admitted into the infirmary on the 15th of January, 1827. At this time her symptoms were a smart fever—pulse tense and full—excessive and distressing pain in the head and limbs, tongue covered with a white fur, but moist—thirst—epigastrium not very sensible. Treatment—venesection ℥x.—senna and manna infusion—hot pediluvium at night.

16*th.*—Bowels have been freely opened—pain in head relieved—that of limbs diminished—the epigastrium has become sensible, as well as the abdomen generally—the tongue is dry, and the fur has assumed a brown aspect, approaching to black. Thirty leeches to epigastrium; blankets wrung out of hot water to extremities. Fomentations of decoction of flaxseed to abdomen. Gum water lemonade.

17*th*—Amendment of all the symptoms—continue treatment.

18*th* and 19*th.*—Continues to improve.

20*th*—Convalescent—milk and water gruel for diet.

21*st.*—Increase diet—discharged the ward well in a few days.

Observations.—Curran exhibited another instance, of which so many are observed amongst the lower classes of the effects of suffering from cold. The impression of cold continued for some time on the surface, induces direct debility of its vital forces and actions. The circulation of its capillaries becomes sluggish, or nearly ceases: this great reservoir of the circulating fluids no longer attracts and receives them into its vessels. By the diminution of its vital forces and its circulating fluids, they augment in other organs or tissues, and in those especially which were previously in a state of irritation or excitement, and in consequence, morbid irritations of various and sometimes of several internal organs and tissues, are the result of the action of cold on the exterior surface. Thus it may be productive of inflammation of the stomach, small or large intestines; of the liver or peritoneum; of the lungs, or the lining membrane of the bronchiæ, or pleura; of the brain or its meninges; and several of these inflammations may occur at the same period.

In Curran, we perceive gastro-meningitis, with rheumatic pains, were the consequence of exposure to cold thinly clad.

Previous to her admission she had been subjected to no treatment. The bleeding and purging dissipated the affection of the head, but the gastric symptoms increased. It is not improbable this was the effect of the purgative. Local depletion, and direct antiphlogistic remedies, however, removed immediately this excess of irritation, and a few days of diet produced rapid convalescence.

Case VIII.—Catharine Shane, aged eighteen years, entered the Alms-house, November 12th, 1826. She had recently arrived from Ireland, in a ship crowded with passengers, some of whom were sick on the passage. At the time of arrival she was in good health. When admitted into the infirmary she was in the fourth day of her disease. She was attacked with violent pain in the head, and sickness of stomach, with great soreness of the mouth. The symptoms at the time she entered the clinical ward, were, fever—pulse frequent and full—tongue dry, brown, with surface broken by fissures, edges cleaner than middle, but also dry—skin hot—tenderness of abdomen and epigastrium on pressure—several stools per diem of yellow colour and watery consistency. Cups were applied to abdomen and epigastrium.

13*th.*—Nearly same as yesterday—abdomen and epigastrium less tender. Directed her to take ℥ss. neutral mixture every hour during the paroxysm of fever—lemonade and barley water for drink. Three P. M. pulse frequent and irritated—tongue cleaner—very slight delirium.

14*th.*—No better—tongue dry and fissured, dark brown—pulse weak and irritated—suffused cheeks. Blisters to legs—

Antimon. Tart	gr. $\frac{1}{6}$,
P. Ipecac.	gr. $\frac{1}{3}$,
P. Opii.	gr. $\frac{1}{3}$,

every two hours. Neutral mixture continued, with same drinks. Seven P. M. partial moisture—wandering in mind—picks at the bed-clothes—gets out of bed at times—tongue dry and fissured—pulse quick. Blister to back of neck—sinapisms to ankles.

15*th.*—Continues in same state—hair to be removed—sinapisms to feet—pulse frequent, 120, and weak.

16*th*—Rested better last night—delirium slight—seems better this morning—tongue cleaner on the edges—bowels opened by an injection. Evening. Pulse feeble—wine whey, ℥ss. every half hour.

17*th.*—Better—rested tolerably well, has more sensibility—complains of the sinapisms—expression of countenance more animated—respiration fuller and more natural—pulse frequent and has more force than yesterday. Wine whey continued.

18*th.*—Much worse—pulse frequent and feeble—muttering delirium—tongue dry, and covered with dark brown fur—restlessness—skin torpid. Carbonas ammoniæ every hour—wine ad libitum—sinapisms—blisters to different parts. All proved ineffectual in rousing the actions of the system, and she expired with a short agony early in the afternoon.

Remarks.—This case was not treated strictly on the physiological principles, and the deviation will be remarked by comparing it with the preceding cases. The patient entered the infirmary on a Sunday. With the existing symptoms, an active local depletion, if not general bleeding, it appears from the history of the case, would have been adviseable. From economical considerations, leeches are often omitted in the management of some cases in the Alms-house, and are substituted by cups. These last seldom answer in fevers with high gastric irritation. The pain they occasion, and the pressure they produce, often increase the gastric distress instead of alleviating it. I once witnessed convulsions brought on by the application of cups to the epigastrium, when very sensible in a case of fever. In the present instance they at least proved of no utility; no abatement of symptoms ensued from their application. A prescription was directed on the 14th with a view to an alterative and diaphoretic effect, for which last the neutral mixture had been prescribed. In fevers, in which the gastric irritation is exalted, attempts to excite the secretions by remedies of this character, prove most generally abortive.

Symptoms considered usually as indicative of prostration, very rapidly came on, and stimulants at first to the external surface, and next internally exhibited were called into requisition. Not the slightest momentary alleviation, which so frequently is induced by stimulants, and seem to sanction their employment, succeeded to their administration, and the patient sunk with rapidity. The body was removed by the friends of the deceased, and an examination, the only means of determining the nature and extent of the morbid lesions, was prevented.

This patient was not seen by Dr. Chapman.

The preceding are those of the cases of continued fever, that occurred during the last fall and winter, of which I am able to collect complete histories. In the next number I shall be enabled to present additional cases, accurately recorded, and accompanied with post mortem examinations, illustrating the character of the diseases, and the condition of the important organs, whence result the fatal terminations of fevers.

ART. VII. *Observations on Piperine, with the Formula for it Preparation, &c.* By GEORGE W. CARPENTER, of Philadelphia.

SINCE the discovery of quinine and cinchonine by the celebrated chemists, PELLETIER and CAVENTOU, vegetable chemistry has made rapid advances. The recent experiments upon vegetable matters have not only swelled the catalogue of useful articles, but have given an additional stimulus to the prosecution, and opened a rich field for investigation to numberless votaries. From a state of neglect and obscurity, this department of science has emerged with unparalled rapidity, to a most exalted position, and the numerous valuable discoveries which have resulted, have ranked it among the most important branches of chemical science.

Every vegetable substance in the materia medica that has yet been subjected to chemical analysis, has produced an elementary or alkaline principle, upon which the virtues and activity of the medicine entirely depend. Even opium which acts in the double capacity of stimulant and sedative, forms no exception to this observation, two principles having been extracted from it; one possessing stimulating, the other the sedative powers, as we have remarked in a former paper.

These isolated substances possess many and great advantages over the crude materials; the active principle is concentrated by the separation of the injurious and inert portions, thus obviating almost entirely the difficulty of exhibition, and facilitating a more speedy and certain action on the constitution. It is well known that many substances in their crude state, in consequence of their bulk and insolubility, cannot in many cases be administered in sufficient quantity to produce the desired effects; in such instances the alkali is well adapted as a substitute, the dose being comparatively small. Another and no less important advantage of the alkaline principles is the uniform persistency of their strength. No one will for a moment question the inconveniences and evils resulting from the great uncertainty of effects, and differences of activity in most of the crude materials; and some of the most important are subject to these defects. For example, there are twenty-five species of Peruvian bark, each one differing in strength. Bark even of the same species, from a difference in adventitious circumstances,* to which it is always exposed, and which, though sometimes scarcely affecting its external characters always injures its properties, is rarely if ever found of uniform quality. In the preparation of quinine, I have met with bark of the same species, and of the same importation, differing twenty-five per cent. in the product of the active alkalies. The physician, therefore, would have been deceived in the strength and consequent effect of this bark, while the quinine is universally the same. For example, the quinine produced by the inferior bark, although less in quantity, was fully equal in quality. If the practitioner, therefore, may be so much deceived by the difference of strength of the same species of bark, how much more will he be disappointed, should he meet with those which produce but one-eighth or one-twelfth of the quantity, and some yield even but a trace of the principles upon which their febrifuge properties exclusively depend.

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* See Carpenter on Cinchona, vol. 9, p. 363, of the preceding series of this Journal.

The preceding observations in support of concentrated medicines, are made in consequence of there being some few who disapprove of vegetable alkalies, and reject their use on all occasions, giving preference to the crude materials. If the opinions of these persons were drawn from experiments, they would certainly be entitled to credit and respect, but where an opposition is made to admitted facts, without advancing a reason, experiment, or authority of any kind, such denunciations can only be considered the effects of prejudice, and should be appreciated as such.

The object of the present communication is to describe a new principle, recently discovered in black paper, which has been denominated piperine, and which has been proved by careful experiments to be an active remedy in intermittent fevers, and has been employed with much advantage also in typhus fever and periodical head-ache, and from the testimonials given in its support, seems to bid fair to become an important addition to the Materia Medica. It may be employed in doses of from one to four grains—it has been given in several cases of intermittent fevers in doses of one grain, and was attended with as much success as the quinine. It is found to be a valuable adjunct to that substance, equal parts of each acting with more energy and success, than the whole quantity of quinine.

Black pepper in its crude state has long been known as a valuable medicine, and is stated to be an excellent adjunct to bark in intermittents, and Mr. Rennie[*] observes that Mr. Brande, must certainly be mistaken, when he says it acts only as a warm condiment, agreeable to the stomach.

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[*] See his Supplement to the Pharmacopœias of London, Edinburgh, Dublin, and Paris.

It is mentioned in Dr. COXE's valuable dispensatory under the article piper, that Dr. FRANK, physician to her majesty Maria Louisa, recommends the black pepper, in different species of intermittent fevers. This had previously been used in the east with success after every known means had been ineffectually tried. The dose is five to ten grains twice a day, and Dr. GHIGINI reports ten cases cured with it. Dr. Frank mentions seventy patients who came under his notice between April and June, of whom fifty-two had tertian, ten quotidian, and eight the quartan fever. Fifty-four were completely cured within about a week, without any subsequent relapse. He dips the seeds of the black pepper in a mucilage of gum Arabic and subsequently in powdered colomba to disguise it, and gives from five to eight pills twice a day. None of his patients required more than from seventy to eighty pills for a complete cure. Dr. Frank recommends the profession to try the extract of black pepper in intermittent fevers. This preparation was tried on nine individuals affected with intermittent fevers of different types in doses of four, eight, ten, or twelve grains dissolved in water in some cases, and given in the form of pills in others, by Dr. Clock, of Trent, and the effects surpassed his warmest expectations.

From these experiments it is concluded, that the extract of pepper is not only one of the best succedaneums for the bark, but that it is even preferable to it on several accounts:—1st. It never produces disturbance in the stomach or bowels—2d. It never failed in producing a cure—3d. Those who were cured did not in any one instance experience a relapse—4th. It produces a regular alvine discharge, as well as the excretion of urine and sweat—5th. None of those who were cured experienced that sensation of languor, so common to a state of convalescence.*

In the Bulletin des Sciences Medicales for April, 1826, there is an account of three cases treated with piperine, by Dr. S. GORDONI, physician to the hospital at Leghorn. The first case was one of double tertian intermittent fever, which for a long time resisted the use of quinine, and although this remedy eventually arrested the paroxysms, whenever it was discontinued the disease returned; the piperine was then resorted to, and the fever ceased on the first day, and did not return. The second and third were also cases of intermittent fever, they were promptly cured by the piperine. From these, and many other cases, Dr. Gordoni infers that the piperine will cure fevers that resist the sulphate of quinine, and that it will prevent a relapse better than this latter remedy.

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* Giornale de Chirurgia Practica.

Dr. Meli has also employed the piperine with success, and considers it a more certain remedy in intermittent fever than the sulphate of quinine.*

Dr. J. S. Rose, who was the first to use the piperine in this city, informs me that he has employed the piperine which I prepared, in twenty cases of intermittent and remittent fevers, and that he is decidedly of opinion that it will be found to be a more certain and efficient remedy than any preparation of bark heretofore used.

> "I have also used it," he adds, "in two cases of low nervous fever, or typhus. I was induced to employ it in these cases, from observing that in intermittent it did not prevent all the stages of the paroxysm. At the time the patient expected his chill, he found a gentle diaphoresis, which continued to increase for two, three, and in some cases for four hours; on the next day, however, (of the expected return,) there was nothing like diaphoresis or fever, the patient passed this period without the least inconvenience, and remained exempt from a relapse, which is not always the case after the use of quinine. These facts led me to believe, that in typhus, when we wish a stimulating diaphoretic, no remedy is preferable for that purpose to the piperine, not even volatile alkali. In this form of febrile action when the animal powers are about to yield to the influence of disease, and the patient fall a victim to the timidity of the practitioner, I have boldly withheld all other remedies, and administered the piperine in doses of two grains every two hours until eight grains had been taken, the low muttering delirium now began to subside, the skin became moist, and the patient sensible of his improvement expressed himself better. On the following day, the same doses were administered, and repeated for three, four, or five days, when I found no fever, the strength increased, and the patient with an inclination for food, and convalescent."

The piperine has also been used by Dr. J. C. Rousseau of this city, in a few cases, in all of which it has been successful. He has favoured me with the following cases which are interesting, as it shows the necessity of caution in prescribing the remedy in large doses.

> "A young girl, about twelve years of age, having had a return of an intermittent fever that had been stopped by the sulphate of quinine, was directed to take one grain of the piperine, made into a pill with conserve of roses. She was a short time after seized with a vomiting, which was repeated to the number of seven times in the space of two hours. It then began to promote alvine evacuations to the extent of twelve or fifteen times. The fever did not return,

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* Ainslie's Materia Indica, Vol. II. p. 622.

and she was directed to continue one grain of the medicine night and morning. It invariably produced alvine discharges in an unusual quantity.

"In another case, a subject of about forty, it produced a radical cure in the dose of three grains in twenty-four hours, continued for several days after. And it is so much the more remarkable as this patient had taken the sulphate of quinine for some days in the quantity of thirty grains every twenty-four hours, as he informed me, remarking at the same time, that during the use of it he was under a most violent and painful state of excitement."

I have just received the following case from my friend, Dr. J. R. Black, of Philadelphia: it affords additional testimony of the powers of the piperine in the cure of intermittent fever.

"Mr. S. aged about forty years, during the first part of last month, applied with a severe quotidian fever, attended with rejections from the stomach, and with violent pain and great determination of blood to the head, during the hot stage, with cold feet and slight delirium.

"The case was treated with the lancet, emetics and purges, which, on the third day, changed its type to the tertian. On the day of intermission sulphate of quinine was administered, which was often rejected, while it always increased the patient's nausea and head-ache. Piperine, (prepared by Mr. Carpenter,) was substituted in doses of one grain every hour to the number of ten a day. The paroxysms immediately ceased, and the patient in a few days was discharged radically cured. J. R. B."

Many other cases might be quoted, in which this medicine has been employed with equally happy results, but enough has been advanced to satisfy the most sceptical of its active properties.

Alcohol and sulphuric æther are the best menstrua for the active properties of the pepper, which very soon imparts its acrimony to these fluids. Mr. Brande gives alcohol and water. I am surprised he should have omitted æther, since it is the most powerful solvent, and particularly, that he should quote water, as it requires five hundred and fifty pints to extract the sapidity of ℔j. of pepper. Water indeed appears to rank lowest as a solvent of the active part of the pepper, while it is the best solvent of the colouring matter, for after the pepper has been exhausted of its sapidity by æther and alcohol, water will make a deep-coloured solution, which, on evaporation, will produce a dark extract, possessing little of the pungency of the pepper.

The piperine employed in the above cases I prepared according to the following formula:—

Digest one pound of coarsely powdered black pepper in one gallon of alcohol for ten days, distil off one-half of the alcohol in a water bath, add by degrees diluted muriatic acid to hold in solution the piperine, then add water sufficient to precipitate the resin and separate the oil, a muriate of piperine remaining in solution, concentrate this solution by evaporation, and add pure potass to decompose it, and neutralize the acid, when the piperine, in consequence of the diluted state of the alcohol, and the absence of the muriatic acid, will be deposited in yellowish transparent crystals—the crystals may be obtained perfectly colourless, by carefully separating the oil and resin, but as there is no disadvantage in the colour, the additional trouble and expense would not be compensated. The piperine in a colourless state is insipid and inodorous, but united with as much resin as enters into its crystallization, its taste is extremely hot, possessing in an intense degree all the pungency of the pepper, with a considerable portion of its odour, and I think, is more active than the former; it was in this form exhibited in the treatment of the cases above described.

The crystals were perfectly transparent, tetrahedral prisms, with oblique summits of a straw colour, and as large as the ordinary crystals of sulphate of magnesia.

Extract of Black Pepper.—Digest eight ounces of black pepper coarsely ground, in four pints of diluted alcohol for four days, occasionally submitting it to a temperature near ebullition in a water bath, filter and evaporate to the consistence of an extract.

This is found also to be an active remedy in intermittents in doses of two or three grains. In a soft state it has proved very convenient to give consistency to piperine and quinine for the formation of pills, while at the same time it increases their activity, (particularly that of the latter.) It is certainly preferable to conserve of roses or gum Arabic, as they enlarge the pill without increasing its effect.

The extract of pepper, in every formula I have seen, has been directed to be prepared with water. This forms a much less active preparation, and possesses several inconveniences, to which the former is not subject.

I have used both the white and black peppers in the above preparations, and although it is stated by most authors that the white is milder than the black, I have found it to yield more piperine, and an extract of much more acrimony and activity, and to contain much less colouring matter.

The constituent principles of pepper are piperine, oil, resin, fecula and colouring matter.

The oil of black pepper is a most powerful article, and has not as yet been employed in medicine, it may prove a valuable stimulant.

The several preparations above described may be procured of Charles Marshall, Druggist, No. 221, Market street, Philadelphia.

ART. VIII. *Medical Statistics: being a Series of Tables, showing the Mortality in Philadelphia, and its immediate Causes, during a period of twenty years.* By GOUVERNEUR EMERSON, M. D.

IN the investigation of human affairs, and the various circumstances which relate to and govern them, statistical calculations, by giving distinctness to views, and accuracy to conclusions, have been found eminently useful. Applied to subjects connected with medicine, at present the most uncertain of the sciences, they may prove of essential service, especially to the branch of public hygiene, as by demonstrating the existence of evils they may lead to a removal of their causes, and serve as a test by which to determine the success or inefficacy of the measures resorted to for that purpose. They may likewise become useful as a means of estimating the comparative value of those systems of medicine, which from time to time succeed each other. Indeed, such an application of medical statistics has already been made in Europe; but the warmth and obstinacy which at this time, distinguish the doctrinal controversies of rival sects, may justly be considered as productive for the most part, of partial views and suspicious conclusions. Estimates upon these subjects should therefore be received with much caution, unless when made by such as are known to owe neither allegiance to, nor bias for, a particular party, or who possess so rare a degree of candour, as to enable them to state facts without partiality or concealment.

The following calculations were projected for the support of no preconceived speculations or opinions, but undertaken solely for the purpose of ascertaining those results which naturally flow from them. Many of these will be found extremely interesting, especially such as relate to the comparative mortality of different diseases, the ages at which they most frequently prove fatal, and the mean duration of human life at this epoch in Philadelphia.

Many places possess certain peculiarities, capable of exerting more or less influence upon calculations of this nature, and which can only be well understood by persons very familiar with them. For this reason it has been thought most adviseable to avoid making formal comparisons with the statements of other cities, and to confine the sphere of observation in the present article, altogether to the locality of Philadelphia, a compendious history of the mortality, with observations upon many of the diseases of which, will be found in the following tables, since the year when the subject was first made one of regular record. The date of this interesting event extends no further back than the year 1807, when through the influence and exertions of Professor James, the first authentic bill of mortality, for the city and suburbs of Philadelphia, was formed and published. No interruption has since taken place in these annual reports, which from time to time have had new interest imparted to them, by the addition of other particulars; such, for example, as the distinction made between males and females, the designation of colour in the deceased, and the account of births.

The authenticity of the Philadelphia bills of mortality may be regarded as resting upon very solid grounds. From authority vested in the Board of Health, this municipal power makes it obligatory upon physicians to give certificates designating the name, age, and sex of all who die under their care, and sextons are bound by still heavier penalties, not to permit the interment of any dead body, until such certificate is obtained, which he returns to the health office on the last day of every week, for publication.

The accuracy with which the diseases are designated in these certificates rests chiefly upon the general intelligence of the medical profession in this city, the members of which are very much in the practice of testing their pathological opinions by autopsical examinations. Further evidences of fidelity in this respect are afforded by the general agreement of the different bills of mortality with each other, and the variations exhibited by certain diseases in correspondence with the influence of well known agents. That many errors, and much vagueness exist in regard to particular details, must be evident to every one well versed in the medical science of the present day. The heads of debility, decay, atrophy, marasmus, consumption, (as an infantile disease,) may be cited as affording the most frequent examples of misrepresentation, but still, the correspondence subsisting between the annual returns, is sufficient to show that the affections even thus reported depend upon the continued operation of some uniform causes.

For the purpose of ascertaining the number born, the various practitioners of midwifery are required to render an account at the Health Office of all births. With regard however to this department, there is some reason to suspect a deficiency in the returns, especially from the outskirts of the city and liberties. But the registry of the dead has, for the most part, been kept with a care and fidelity creditable to those who have had its superintendence, and especially to the present clerk, who, for the last ten years, has conducted its details.

General Observations on the Topography and Climate of Philadel-

phia.—The city of Philadelphia lies in north latitude 38° 57′, and longitude 1° 54′ east from Washington.* It is situated on the western shore of the river Delaware, and extends over slightly elevated ground about two miles to the banks of the river Schuylkill, five miles above its confluence with the Delaware. The last named river is about a mile wide at the town, and has sufficient depth of water to admit ships of a very large burthen, whilst the Schuylkill, on the other side, is navigable for sea vessels of moderate draught. The tide in the Delaware rises, on an average, to the perpendicular height of about seven feet. The water continues fresh for more than fifty miles below the city. Its distance from the Atlantic ocean, by the natural course of the river and bay, is about one hundred and twenty miles, but not more than fifty-five miles by a direct line in an easterly direction.

The portion of the isthmus on which the town stands, is of the tertiary formation, consisting of sand and gravel, for the most part overlaid with a thick stratum of clay, the whole resting upon a primitive basis. That it was once covered by the sea, is clearly shown by the marine deposits, consisting of bones, teeth, shells, &c. found below the natural surface. Vegetable relics have likewise been met with. A few years since hickory nuts were discovered in digging a well at a depth of more than 30 feet. In one of the highest points of the city plot, the trunk of a buttonwood (Platanus occidentalis) was found imbedded in a black mud, and surrounded by acorns and leaves.

By digging at various depths, water is easily obtained in every part of the city and suburbs. Near the river it may be procured within ten or twelve feet of the surface; its depth in other parts is usually about thirty feet. Its qualities were excellent before the city became so populous, and its sources were contaminated by infiltrations. At present, an abundant supply of most wholesome and palatable water has been introduced from the Schuylkill.

The climate of Philadelphia, appears to have partaken in the change which of late years has been noticed in most parts of the country. This variation is most strikingly manifested as respects the intensity and duration of the cold weather. It has been observed, that during the last century, the winters were more uniformly cold and the rivers more completely and for a longer time obstructed, than at present, when it often happens that the ice does not become stationary on the Delaware through the whole season, and when it does become fixed, seldom remains so longer than a few days. We find it recorded that in 1704, snow fell three feet deep, and in the winter of 1779–80, the Delaware continued frozen for three months. Moreover, that in 1764, 1791 and 1797, this river was completely frozen in one night, so as to be passable the next day. Instances of such intense cold have not occurred within the present century.*

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* Or 75° 8′ 45″ west from Greenwich.

From an examination of the records of the *Rain Gage*, kept at the Health Office, in a central part of the city, it appears that, from March 1820 to February 1827, inclusive, a period of seven years, the average quantity of rain for the seasons is as follows: For the three months of Spring 8.29 inches—Summer 9.54 inches—Autumn 10.54 inches—Winter 8.15 inches.

The greatest quantity which fell during that time, in the twenty-four hours, was four inches on the 3d of October, 1820. The largest quantity in forty-eight hours was 5.65 inches, on the 3d and 4th of the same month, in the same year.

The prevailing winds throughout the year are from the westward. Viewed according to the seasons, it may be observed, that in the Spring and Fall, the winds are more variable than during the rest of the year. Their tendency in the Spring and Summer, is more from the eastward than at other seasons. During Summer they usually come from the westward and southward, but in winter from the westward and northward. When easternly winds prevail, they generally proceed from a northernly direction. Cloudy and rainy weather are their common attendants, the weather usually clearing away by their shifting first to the southward, and then to the west or northwest, from which points they often blow with great violence.

Observations on the Tables.†

Table I.

This table presents a series of observations made on the climate of Philadelphia, during ten years, viz.: from 1811 to 1820, inclusive; showing the changes of temperature indicated by Fahrenheit's thermometer for each month, and season of that period. It is formed from observations originally published in the Eclectic Repertory, and though not continued to so late a date as would have been desirable, still on account of the regularity and accuracy with which they were conducted, we have chosen them in preference to any more recent ones with which we are acquainted. From these observations, it appears that the mean temperature of the months estimated from an average of ten years is, for January, 30°—February, 32°—March 48°—April, 50°—May, 59°—June, 71°—July, 75°—August, 72°—September, 65°—October, 55°—November, 46°—December, 34°.

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* For more minute information relative to the temperature of the weather in particular months and seasons, see Table I.

† These are by no means intended to embrace all the views worthy of notice which the tables develope, and doubtless many more of equal, and perhaps greater interest will present themselves to others who examine them.

The average mean temperature of the seasons is as follows, viz. The three months of Spring, 50°—Summer, 73°—Autumn, 55°—Winter, 32°.

The lowest fall in the thermometer observed in the above mentioned period at eight o'clock, A. M. was 4° above zero, on the 15th of February, 1817. The highest rise in the same time at three o'clock, P. M. 97° on the 12th of June, 1818.*

Table II.

Is an abstract from the census of the city and county of Philadelphia, taken in 1820, by order of the general government, showing the number and description of inhabitants in the wards and districts, from which returns of interments are made.

The observations we shall offer upon this subject, will be directed in the first place to the white population.

In this the proportion of the sexes is as 111 females to 100 males, a disparity which has been attributed for the most part to the greater risks of life encountered by the male sex in their various occupations and pursuits.† In proof of this we find from an examination of the table that the number of males under ten years of age exceeds that of the females; but when the estimate is continued so as to embrace the sixteenth year, the balance is considerably in favour of the females, the males having in the mean time been reduced by the operation of the above mentioned circumstances.

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* It is to be regretted that the Philadelphia bills of mortality furnish no precise data, by which a table can be formed, to show the deaths per month by the *principal diseases,* and thus exhibit the immediate influence of the seasons upon their mortality. Interesting calculations made for other places show that chronic complaints are not much affected by such influence, which is chiefly displayed upon the acute forms of disease.

† The average proportion for the whole United States, is, however, very different; namely, 97 females to 100 males. In the new States, the excess of males among the children is observed to be very great. In Alabama, Illinois, Missouri, Mississippi and Indiana, all of which have been lately settled, there are 76,067 boys, and only 70,033 girls under ten years of age; that is, at the rate of 100 boys to 92 girls.

The relative proportion existing between the sexes under ten years of age, is about 3.3 per cent. in favour of the males; but when the estimate is made to include those under the sixteenth year, the females are found to be the most numerous in the proportion of 2.4 per cent.

The females under the 26th year exceed the males under the same age, in the ratio of 8.8 per cent. Under the 45th year, the excess of females is 9.1 per cent., or as 100 females to about 90.9 males; whilst the excess of females of and beyond this age is nearly 26 per cent., or at the rate of 100 women to only 74 men.

With regard to the *black* population, an estimate of all ages shows the relative proportion of the sexes to be 100 females to 71 males. Under the 14th year, the proportion is equal, but when the estimate is extended so as to include all under the 26th year, the females exceed the males 30 per cent.; that is, at the rate of 100 females to 70 males. Reckoning all under 45, the excess of females is 28 per cent., or as 100 to 72; but in the amount of the sexes of 45 years and upwards, the number of females exceeds that of the males nearly 31 per cent.; that is, for every 100 women there are only 69 men.

The following statement affords a condensed comparative view of the proportion of the sexes at various periods of life:—

	WHITES.				BLACKS.			
Under 10*	100 males		to 96.7 females.					
Under 14					100 females		to 100 males.	
Under 16	100 females		to 97.6 males.					
Under 26	100	do.	to 91.2	do.	100	do.	to 70	do.
Under 45	100	do.	to 90.9	do.	100	do.	to 72	do.
Of 45 and upwards	100	do.	to 74	do.	100	do.	to 69	do.
Proportion of all ages	100	do.	to 89	do.	100	do.	to 71	do.

The number of whites of and over 26, is	39,335	Being in the proportion of 56 of and over 26, to 100 under that age.
under 26,	70,050	
The number of blacks of and over 26, is	5,191	Or, as 84, of and over 26, to 100 under that age.
under 26,	6,193	
The number of whites of and over 45, is	12,739	Or, as 13.3 of and over 45, to 100 under that age.
under 45,	96,646	
The number of blacks of and over 45, is	1,381	Or, as 13.1, of and over 45, to 100 under 45.
under 45,	10,003	

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* The blacks under 10 and 16, and the whites under 14, are not designated in the table.

TABLE III.

This table exhibits the number of deaths in the city and suburbs of Philadelphia, for each one of a series of twenty years, viz: from January 1st, 1807, to January 1st, 1827, inclusive; showing at the same time those which occurred from the most prevailing diseases.

From the amount of every year, as represented in this table, the number reported in the bills of mortality under the head of *still-born*, are excluded, as never having possessed a proper existence; a rule applicable to all the subsequent statements unless otherwise specified. Their numbers appear in a separate column, and it may be well to remark here, that in the public records of Philadelphia, no discrimination is made between the abortions of the first months of gestation, and the premature and dead-born of the latter periods, which, with perhaps a very few exceptions, are disposed of in the numerous burying grounds throughout the city and suburbs, and reported with other interments at the Health Office. That the bills of mortality may in future show the proper distinctions to be made under this head, it would be well for the Board of Health to issue suitable instructions. Until some regulation for this purpose is adopted, the large numbers of still-born reported may serve, at least with superficial observers, to cast a shade of reproach upon the females and medical profession in Philadelphia.

The highest number of deaths for one year, contained in the series, is 4372, in 1823; the lowest number is 1884, in 1809. The amount for the first ten years of the series is 20,585; for the remaining ten years 32,419. The total number of deaths for the whole time is 53,004.

The prevalence and fatality of particular diseases in different years, is strikingly exemplified in this table. Under the head of *Diseases of the Lungs*, the variation from year to year is chiefly observable in the column of *Acute affections;* whilst the annual proportion from *Consumption* seems to have advanced at a steady step with the progress of population. The highest number of deaths by this disease in one year is 587, reported in 1826; the lowest number 216, in 1813. The whole mortality by consumption in twenty years, is 7977.

Under the head of *Acute Diseases of the Lungs*, the deaths reported in the bills of mortality under the various titles of Pleurisy, Inflammation of the Lungs, Breast and Chest, are included. The greatest mortality for one year exhibited in this column, is 222, in 1826; the lowest 61, in 1813. The number for the whole series, is 2284; which, added to the amount from consumption, gives a grand total of 10,281 deaths in twenty years from *Diseases of the Lungs.*

Under the head of *Fevers*, which in this table includes only those of most frequent prevalence, striking fluctuations are observable in all the columns. That which contains the totals, shows a steady increase with the progress of time and population, until the year 1818, when the amount rises to 492, chiefly produced by the prevalence of a bilious fever, of a typhoid and highly mortal character, almost exclusively confined to the blacks inhabiting the narrow streets, courts and alleys of the south-western parts of the city and suburbs.* The still greater increase observable in the succeeding years, until the amount in 1823, is no less than 744, depends upon causes of an entirely different nature, which, as they have seldom or never been known to exist to the same extent before in this city and its vicinity, must be regarded as constituting an extraordinary and casual event.† The bill of mortality for the year 1820, was the first that swelled from the effects of this epidemic, which spread throughout the neighbouring country on all sides, and encroached upon the outskirts of the town, but rarely showed its influence upon the interior parts. Indeed, as I formerly stated in noticing the same subject, it was curious to observe how accurately the invasions of the sickly air during the summer and fall months, were limited by the pavements, few or none of those who kept within them, having been affected with what acquired the popular designation of *Country Fever.*‡ Strange as it may appear, the atmosphere of the city proper was seldom more free from the *causes* of disease, than during the years wherein the bills of mortality exhibited the greatest number of deaths. With the view of ascertaining as far as practicable, the comparative healthiness or unhealthiness of the city and suburbs, the Board of Health issued, in 1823, circulars to the physicians, requesting them to note in their usual certificates of mortality, the districts in which their deceased patients had resided. This measure, though adopted late in the season, clearly proved that the proportion of interments was as anticipated, much smaller for the city than for the suburbs, as the following short statement will clearly show.

The number of interments reported at the Health Office, were from—

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* For a particular description of this singular epidemic, see the Philadelphia Journal of the Medical and Physical Sciences, vol. 3. p. 193.

† The fatality of this epidemic may in some measure be judged of, by comparing the sum of the first ten years of the series of totals in the column of Fevers, viz: 1540, with that of the last ten years, which is 4580!

‡ See the Philadelphia Journal of the Medical and Physical Sciences, vol. viii. p. 143.

August 9th to the 16th	130	Of which there were from the city	53
16th to the 23d	113	do.	48
23d to the 30th	129	do.	50
30th to Sept. 6th	112	do.	45
Sept. 6th to the 13th	137	do.	63
13th to the 20th	115	do.	15
	736		274

In the two hundred and seventy-four deaths reported from the city, sixty-five, or more than a fourth were from the Alms-house, which at that time was crowded with paupers, chiefly from the suburbs.

Cases of the prevailing remittent and intermittent fevers, were however, to be met with in all parts of the city proper, but their origin could nearly always be traced directly to the air of the country or outskirts of the town, a short exposure to which in the evening or night was sufficient to give rise to those diseases.

In the column designating the deaths by typhus, we observe that the epidemic seems to have terminated in that form more frequently in 1823 and 1824, than in other years. It is to be regretted that so many instances are reported, wherein the type is left undesignated, as for example, in 1823, where the particular character of two hundred and forty-three cases of fever which terminated fatally in that year cannot be ascertained.

We are happy in being able to state that at this time, the sources of the disease appear exhausted, as the present season has proved unusually healthy. This we have it in our power to demonstrate very clearly, by a reference to the records of the Philadelphia Dispensary, from which we make the following estimates of the number of applicants, to that institution for medical relief in several years, during the month of August, the most sickly of the season.

Years.	1823.	1824.	1825.	1826.	1827.
Patients.	694	347	363	310	264

The column showing the deaths by *yellow or malignant fever*, presents the highly interesting fact, that for the last twenty years, the whole mortality amounts to only one hundred and twenty-two, of which number seventy-three occurred in 1820. This statement will perhaps excite no little surprise at home, and doubtless be greatly discredited abroad, but may nevertheless be relied upon as correct. That the amount should appear to most persons less than they would expect, is probably owing to the high degree of alarm which usually attends the appearance of a single case of yellow or malignant fever, and magnifies the occurrence, by association with former epidemics, to a fearful extent.

The column of *totals* under the head of *Inflammations*, shows a steady increase in the phlegmasiæ, with that of population, the variation in the whole series running between four hundred and forty-seven, in 1826, the highest extreme, and one hundred and thirty-eight in 1809, the lowest number. The amount for the whole series is four thousand seven hundred and fifty-eight.

Of *Inflammation of the Brain*, the greatest number of deaths reported for any year, is sixty-six in 1824. The lowest eight, in 1813. The whole amount for twenty years is five hundred and eighty-three.

As might be expected, the fluctuation is much greater in the column of inflammations of the *Lungs and Chest.* The highest number of these is two hundred and twenty-two, opposite the year 1826. The lowest, sixty-one, in 1813. The amount for the whole series is two thousand two hundred and eighty-four.

No very great variation is observable in the column embracing inflammation of the *Stomach, Bowels and Peritoneum*. the highest number of which for any one year is one hundred and nineteen, in 1824; the lowest twenty-nine, in 1807. The whole number for the twenty years is one thousand two hundred and ninety-one.

Of inflammations of the *Liver*, the highest amount is fifty-four, in 1826; the lowest nine, in 1807. Total for the whole series, five hundred and eighteen.

With regard to the columns representing the deaths by other phlegmasiæ, such as inflammation of the *Heart*, *Pericardium*, *Spleen*, &c. there is little worthy of observation, except, that as these are not to be found in the early bills of mortality, they must either have become more frequent of late years, or been designated with greater care.

In the column of totals, under the head of *Dropsies*, the sums vary between two hundred and seventy, in 1825, the highest extreme, and ninety-eight, in 1813, the lowest number. The whole amount for the series is three thousand four hundred and seventy-four.

The greatest number per annum of *Hydrocephalus*, is one hundred and forty-seven, opposite the year 1823; the lowest thirty-eight, in 1813. The whole amount of the series is one thousand six hundred and two.

The column of *Dropsy of the Chest*, presents a greater annual fluctuation than any other under the general head, varying between the extremes of forty-seven in 1823, and five in 1818. The amount of the whole series is five hundred and twenty-one.

The *undesignated dropsical* affections reported annually, consist, with perhaps very few exceptions of *Anasarca* and *Ascites.* They vary between one hundred and thirty-one, in 1819, the highest, and thirty-five, in 1814, the lowest number. The whole series amounts to one thousand three hundred and fifty-one.

Under the head of *Bowel Complaints*, great variation is conspicuous in all the columns. In that containing the annual totals, the highest number is five hundred and sixty-two, opposite the year 1823. The lowest, one hundred and fifty-three in 1816. The amount of the whole series is six thousand two hundred and eighty-nine. The fact that much the highest number of deaths from these affections occurred during the greatest prevalence of the epidemic remittent and intermittent fevers, shows how much all these diseases depend upon the same kind of atmospheric constitution.

In the column containing the deaths per annum of *Cholera*, the sums vary considerably, the highest number being two hundred and sixty-five, in 1823, and the lowest ninety, in 1816. The whole series amounts to the formidable sum of three thousand eight hundred and twelve.

The annual reports of deaths from *Diarrhœa and Dysentery*, are so nearly alike in respect to numbers, that they have both been placed in the same column, the different sums of which vary almost as much as those of cholera. The highest number is two hundred and ninety-seven, in 1823; the lowest forty-four, in 1812. The whole amount for the twenty years, is two thousand four hundred and seventy-seven, making, when added to those from cholera, the total amount of deaths from *Bowel Complaints*, six thousand two hundred and eighty-nine.

The number of deaths reported annually under the head of *Convulsions*, seems to have steadily increased with the progress of population. The highest number for one year in the whole series, is three hundred and sixty-eight, in 1824; the lowest one hundred and twenty-seven, in 1807. The amount for the twenty years is three thousand, seven hundred and thirty-one.

Of *Croup*, the greatest mortality per annum is eighty-nine in 1820; the lowest number in the series, twenty. The total amount of deaths in the twenty years, is one thousand and forty-one.

The column showing the deaths by *Hooping Cough*, exhibits great fluctuation. The highest number in a single year, is one hundred and fifty-one, in 1819; the lowest, six. The whole amount in twenty years, is eight hundred and five.

The number of deaths reported from *Measles*, shows, as might be expected, great variations from year to year. In seven years of the series, no deaths were reported from this disease. The highest number is one hundred and fifty-six, in 1823; the lowest, one. The total amount for twenty years, is six hundred and sixty-seven.

With regard to *Small-Pox*, we find, as in the case of measles, seven years out of the twenty, wherein no deaths by it were reported. The greatest mortality in any one year, occurred in 1824, when the number of deaths was three hundred and twenty-five. The next highest number is one hundred and sixty in 1823. The amounts of other years vary from these to only one. The total for the twenty years is one thousand and eighty, the proportion of which is about twenty, out of every thousand deaths by all diseases.

Although the greatest mortality from this loathsome distemper took place at a time when it might have been supposed that few or none remained unprotected, still the amount for so long a period furnishes a pleasing comment upon the experience of former times. It has been estimated, that during the first thirty years of the eighteenth century, the number of deaths from small-pox in London, was seventy-four out of every thousand: and during an equal period at the close of the same century, the amount had increased to nearly one-tenth of the whole mortality. This multiplication has been ascribed to the introduction and practice of inoculation, which, although esteemed one of the greatest improvements ever introduced into the medical art, had, by leading to a more extensive circulation of the contagion, actually promoted the ravages of the disease it was intended to ameliorate. How striking the contrast between these consequences and those resulting from the substitution of vaccination.

Under the head of *Asthma* the sums representing the annual number of deaths vary from twenty-one, in 1825, to four, in 1808. The whole amount of the series is two hundred and five.

The column containing the deaths by *Apoplexy*, though very well filled, is perhaps entitled to many more, since it is highly probable that many reported as sudden, were from this cause. An examination of the table, showing the ages at which the deaths under this last head took place, presents such a correspondence with those which occurred from apoplexy, as almost to confirm the observation.

The greatest number recorded under this head for one year is sixty-one, in 1825; the lowest seventeen, in 1812. The amount for the whole series is eight hundred.

The numbers in the column headed *Palsy*, vary between forty-seven, in 1824, the highest, and ten, in 1810, the lowest annual amount. The total of the whole series is five hundred and forty-eight.

It is gratifying to observe under the head of *Insanity*, that the proportion of deaths by it has not kept pace with the progress of population, since the amount in the last ten years is not even so great as that during the ten preceding. The highest number in any one year is forty-one, in 1818; the lowest thirteen, in 1809. The whole amount for the twenty years, is five hundred and fifteen. It should be observed, that the number of deaths under this head, is probably much beyond the fair proportion to the population of this city, since a very large amount of the patients in the Pennsylvania Hospital, the principal receptacle for the insane within the limits to which our statements are confined, have been brought from a distance.

The head of *Drunkenness*, for various reasons, presents us with but an imperfect criterion whereby to judge of the deplorable extent of the evil. In the first place, many die from diseases induced by this species of intemperance, whose deaths are reported under the name of those diseases. Oftentimes too, the physician from a regard for the reputation of the deceased or respect for the feelings of the relatives, has been induced to report the death under some other designation, substituting for example the name of a symptom. In this way it happens, that few cases are reported from direct drunkenness except such as occur in the most destitute and abandoned. The deaths by mania a potu, having for the last five years of the series been returned separately, are placed in the column of drunkenness, with their number designated in a maginal note. The whole amount is 558.

Suicide appears to have become less frequent of late, as the amount for the last ten years of the series is only four greater than that for the first ten, notwithstanding the increase of population. The greatest number which occurred in any one year, was thirteen, in 1826. The amount for the twenty years is 102.

Under the head of *Cancer*, a steady increase is manifested, in running down the column. The highest number of deaths reported by it in any one year, is 23, in 1820; the lowest 4, in 1812. The number for the twenty years amounts to 272.

In the column headed *Gravel and Stone*, the diminution of deaths is very obvious and highly gratifying. Whether this is owing to greater exemption from these diseases, increased professional skill, or to both, might afford an interesting subject for inquiry. The greatest number of deaths from these affections recorded for any one year, is five, in 1813. In 1820 and 1822, there are none reported. In 1823, one. The whole number in the twenty years is forty-six, of which only twenty have occurred within the last ten years.

The column headed *Parturition and Childbed*, although it may contain some few deaths by puerperal fever, does not embrace those reported under that title, the number of which will be found in other tables. Considerable fluctuation is observable in the yearly reports of these casualties, the highest number being twelve in 1807. For three years, viz: 1818, 1819, and 1823, no deaths were reported under this head. The whole number for the series is ninety, only thirty-eight of which have occurred within the last ten years. This, supposing all the casualties included except puerperal fever, would imply an improved state of the obstetric art.

The amount of deaths reported annually under the head of *Epilepsy*, varies from eighteen, in 1820, the highest number, to three, in 1813 and 1817, the lowest of the series. The whole amount is one hundred and seventy-five.

TABLE IV.

This table presents a summary of the deaths in Philadelphia for each month in a series of twenty years, with the number of adults and children designated. In the number of the latter, the still-born are included according to the usage of the Board of Health in their annual reports, it having been found impracticable to make an accurate monthly estimate of them for deduction. The nearest approach we can probably make to their numbers, is by reckoning them at about five per cent. of the sums stated for children, that being an average proportion for ten years.

Estimating the deaths in the whole series for the different seasons, we obtain the following results, viz:

	Adults.	Children.
In March, April and May,	7229	5264
June, July, and August,	7606	9462
September, October, and November,	7545	6369
December, January, and February,	6909	5153

The months according to the mortality of both adults and children, stand thus, beginning with the highest:—1st, August; 2d, July; 3d, September; 4th, October; 5th, June; 6th, March; 7th, April; 8th, November; 9th, January; 10th December; 11th, May; 12th, February.

Arranged according to the greatest mortality of *adults* alone, they take the following order:—1st, August; 2d, September; 3d, October; 4th, April; 5th, March; 6th, July; 7th, January; 8th, November; 9th, June; 10th, February; 11th, December; 12th, May.

According to the greatest mortality of *children*, thus:—1st, August; 2d, July; 3d, September; 4th, June; 5th, October; 6th, March; 7th, November; 8th, December; 9th, January; 10th, April; 11th, May; 12th, February.

It is interesting to compare one of the results presented by this table, with calculations made in England, where the proportion of old persons who die during cold weather to those who die during the warm season, has been estimated at 7 to 4. The whole number of deaths of all ages is greatest in the months of January, February and March; and least in June, July, and August; which, it will be seen, is widely different from what takes place in this part of America. The results in both countries are, however, at variance with the observations of CELSUS, who, in treating upon the comparative salubrity of the different seasons in his time and country, says:—"Saluberrimum ver est; proxime deinde ab hoc hiems; periculosior æstas, autumnus longe periculosissimus."

TABLE V.

This table shows the ages at which the deaths from particular diseases occurred. The titles of the diseases have been copied from the bills of mortality. A few of them designating accidents and affections of a vague character are omitted, as tending rather to perplex than to elucidate the subject. The alphabetical arrangement has been adopted as the most convenient.

Abscess, is the first affection which presents itself, but the particular kinds are left undesignated. The deaths were common to all ages, and it may be surmised, that most of those set down under the twentieth year were of a scrofulous character.

In the number of deaths reported as by *Angina Pectoris*, we are inclined to attribute those included under the first year to that kind of syncope or asphyxia sometimes affecting infants at birth, and a few days afterwards, the pathology of which differs essentially from that of angina pectoris common to more advanced life.

The deaths from *Asthma*, were most numerous after the age of puberty, and especially so between the 60th and 80th years.

The greatest number of deaths by *Cancer* and *Scirrhus* occurred between the ages of 40 and 50.

Of *Consumption*, the greatest mortality appears between the 30th and 40th years.

Dropsy of the Brain, exhibits the highest amount of deaths under the first year. Dropsy of the *Chest*, between the 40th and 50th years, and Dropsies of kinds not designated, (chiefly *Anasarca* and *Ascites*,) between the 30th and 50th years.

Of *Epilepsy*, most of the deaths reported, are included between the period of puberty and the 60th year.

Scarlet Fever, appears to have been chiefly fatal between the 2d and 20th years. *Fevers*, of other descriptions, exhibit the greatest mortality between the ages of 20 and 50.

Of *Gravel and Stone*, most of the deaths are included between the 40th and 90th years.

Of *Hæmorrhages*, the mortality is much the greatest between the 20th and 50th years.

Of *Insanity*, most of the deaths occurred between 30 and 40.

Of *Inflammation of the Brain*, the deaths were most numerous from early infancy to the age of 40. Of Inflammation of the *Lungs and Chest*, the highest number appears under the first year, but of the deaths which occurred from this form of inflammation in the latter stages of life, the greatest amount is between 30 and 40. From puberty however, to the most advanced age, the mortality appears to have maintained a regular ratio to the population. Of inflammation of the *Stomach and Bowels*, the deaths appear to have been much more common to the early stages of life, the highest number being under one year, and next greatest between the 20th and 30th years. Of inflammation of the *Liver*, most deaths are recorded between the 20th and 60th years. Of inflammation of the *Bladder*, between the 50th and 60th years. Of *Erysipelatous Inflammation*, much the greatest number of deaths are reported under the first year, and of those which occurred after the age of puberty, the most were between the 30th and 50th years.

The highest number of deaths by *Palsy*, appears between the 60th and 70th years, and nearly four-fifths of the whole amount reported, are in the period between the 40th and 90th years.

Most of the deaths from *Rheumatism*, occurred between the ages of 30 and 50.

The number of deaths from *Scrofula*, is nearly the same at every period under the 30th year, but after this age the proportion is quite small.

The deaths from *Small-pox*, were most numerous between the ages of 20 and 30, and nearly equally so under the first year. Some occurred even so late as the 70th and 80th years.

Under the head *Sudden*, most of the deaths, especially among infants, were probably occasioned by affections of obscure pathology. In very many instances, apoplexy has doubtless been reported under this title, more particularly when it has happened that the subject was not seen by a physician previous to death.

TABLE VI.

The whole number of deaths reported in the Philadelphia bills of mortality from Jan. 1st, 1807, to Jan. 1st, 1827, still-born excluded, is fifty-three thousand and four.

This table exhibits the proportion of deaths by each of the most frequent diseases to the whole number of deaths. Its objects are so very perspicuous as to require neither explanation nor comment to make it understood.

TABLE VII.

This table shows the annual number of deaths of children, reckoning as such all under the twentieth year, according to the usage of the Board of Health.

Except a few remarks relative to *bowel complaints*, we shall leave comments upon this interesting table to others.

The number of deaths reported from *cholera*, the most fatal in the list, will be found varying considerably from year to year. The highest for any one year is two hundred and fifty-three, in 1823. The whole amount for the twenty years is three thousand six hundred and thirty-nine. The influence of the epidemic agents, which, for the last seven years have been so unusually active, is very perceptible in this column.

The last observation is likewise applicable to the deaths from *diarrhœa and dysentery*, the whole number of which for the series is one thousand three hundred and seventy-three, making the total amount of deaths under puberty, from bowel complaints of all kinds, five thousand and twelve.

TABLE VIII.

This table shows the deaths from diseases most incident to the early stages of life, with the proportion by each particular disease, to the whole number of deaths under the age of puberty. To render the subject more distinct the diseases are arranged according to their mortality.

Bowel complaints, as the most destructive, stand first in this order. Of these about two-thirds are under the general designation of *cholera*, nearly all of which were doubtless entitled to the specific appellation of *cholera infantum*, a disease almost peculiar to the United States, in many parts of which it exists endemically under the common name of *summer complaint*. Of three thousand eight hundred and twelve, the whole amount of deaths reported from cholera, adults and children inclusive, three thousand six hundred and thirty-nine were under the age of puberty, and three thousand five hundred and seventy-six under the fifth year, viz. two thousand one hundred and twenty-two under the first year, one thousand one hundred and eighty-six between the first and second years, and only two hundred and sixty-eight over the second year. As this affection seldom attacks those beyond the fifth year, the balance of two hundred and thirty-six between the amount at that period and the total at all ages may be considered as *cholera morbus*.

The proportion of deaths by cholera, to the whole number under the twentieth year, is 1 in 6.3; of diarrhœa and dysentery, 1 in 16.8; and of all kinds of bowel complaints as 1 in 4.6.*

The mortality of infants from *Convulsions* is truly appalling, and for the whole twenty years amounts to three thousand three hundred and fifty-three, nearly a seventh part of the whole number of deaths under puberty. Of this sum, two thousand five hundred and fifty-six were under the first year, leaving a balance of only seven hundred and ninety-seven for the remaining nineteen years.†

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* There are many reasons for believing that *cholera infantum* originates from a species of malaria similar to that giving rise to intermittent and remittent fevers and dysentery, in subjects of more advanced life, but modified by the age and peculiar circumstances, incident to the city, a removal from which to the country generally acts like a specific in curing this affection. It may be further observed with regard to the numerous deaths among infants by this and other bowel complaints, that they are generally confined to the offspring of the poor, and especially prevail among the blacks. Indeed, deaths by cholera infantum rarely happen in houses with large and well aired apartments.

† The justly celebrated Tissot, in his *Avis au Peuple*, published at Paris towards the close of the eighteenth century, introduces some very excellent remarks relative to the convulsions of infants, which he regards as almost always induced by some other ailment or disease, especially from the retention of the meconium, the presence of acidities, or crude and indigestible substances in the bowels, teething and worms. The great prevalence of these affections in his time, with the obscurity which enveloped them is well ex-

The class of *Phlegmasiæ*, according to our arrangement, stands third in the scale of infantile mortality. The whole amount of deaths from inflammations of all kinds, in the twenty years, is two thousand and eighteen, the proportion of which to the deaths from all other diseases under puberty, is as one to eleven. The largest amount of any one affection is eight hundred and sixty-seven, from inflammation of the *lungs and chest*, being in the proportion of one in twenty-six of the whole amount of deaths under puberty from the phlegmasiæ. Of this amount it will be observed that much the highest number of deaths occurred under the first year. A diminution is apparent between this age and the tenth year, after which it rises again, and continues increasing for some years, as may be seen by reference to Table V.

The next highest number of deaths under this head, is six hundred and twenty, from inflammation of the *stomach and bowels*, the ratio of which to the whole amount of deaths from all infantile diseases, is as one in thirty-seven. Of these, the largest portion happened under the first year.

Inflammation of the *brain* does not appear to have been fatal to those under the first year in the same proportion as the former affections, the sums of the four periods varying but little from each other. The lowest number is between the first and second years. The whole amount for twenty years is three hundred and nineteen, which is more than one-half of all the deaths in twenty years by the same affection, reckoning those of all ages.

With regard to the deaths from *Measles*, which disease occupies the tenth place in our arrangement, much the greatest mortality appears between the first and fifth years, after which indeed but eighty-one deaths out of the whole amount of six hundred and fifty-four occurred.

Of *Small-pox*, the highest number of deaths recorded, is in the period between the second and fifth years. The whole number for the twenty years is six hundred and forty, which is considerably more than half the amount of deaths from this disease at all ages.

Catarrh, seems to have been extremely fatal during the first year of infancy, two hundred and sixty-one deaths having occurred in that time out of four hundred and twenty-one, the amount under puberty for the whole twenty years. This affection, it is probable, never

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pressed in the following quotation from the above mentioned treatise:—Presque tous les enfans qui meurent avant l'âge d'un an, et même de deux, meurent avec des convulsions, l'on dit qu'ils sont morts de convulsions, et l'on a en partie raison. Vol. ii. Chap. xxvii. §. 378.

proves fatal, unless when it terminates in engorgement or inflammation of the mucous membrane of the lungs, or other portions of the contents of the chest.

The deaths from *atrophy, tabes, and marasmus*, have been all placed under the same head, as depending frequently upon the same causes, and often confounded together. The highest number is under the first year, namely, during the period of lactation.

Sore Throat is a title so very indefinite that we shall pass it without comment.

In regard to most of the remaining diseases, the deaths from which are reported in this table, no observations occur to us which it would not be reckoned quite superfluous to mention in this place.

The deaths in childhood from *Erysipelatous inflammation*, amount in the twenty years to ninety-two, of which number sixty-four are represented as having occurred under the first year. From this estimate we may infer that the affection is much less fatal in this city than in many parts of Europe, particularly in their various lying-in hospitals.

Computing the whole number of deaths by inflammations of all kinds, for each period specified in the table, they would stand thus: under the first year, eight hundred and seventy-one—between the first and second years, three hundred and seventy-three—between the second and fifth, two hundred and ninety-nine—between the fifth and tenth, two hundred and eleven—and between the tenth and twentieth, two hundred and sixty-four—making altogether the sum of two thousand and eighteen.

The fourth class of diseases, according to the arrangement of the table, is that of *Dropsies*, the proportion of deaths from which to those of all other diseases under puberty, is one in twelve. The whole amount of deaths from this source in the twenty years, is one thousand eight hundred and seventy-one, of which number, no less than one thousand five hundred and thirty-nine are reported as having occurred from *dropsy of the brain* alone, being one in fifteen of the deaths under puberty from all other causes. The highest number in any single period, is five hundred and thirty-one under the first year; the lowest, fifty-two, between the first and second years.

The number of deaths reported from *Debility and decay*, make this head the fifth in the scale of mortality. There is much vagueness and obscurity in this title, and there can be little doubt that it has been often resorted to when the indications of the specific disease have been slightly or but imperfectly understood. The proportion of deaths before the age of puberty reported under this head is as one to fourteen of those from all other affections.

The deaths from *Fevers* make this head the sixth in the scale, the whole amount of all kinds being one thousand four hundred and ninety-six, or one in fifteen of all other diseases under puberty.

Of *Scarlet Fever* the amount for the whole twenty years is ninety-three.

The number of deaths from fevers of all other kinds, increases as the age advances, being much the greatest under the last period.

Consumption is the seventh in the scale of mortality. As might be expected, the number of deaths increase by it, as the age advances.

Hives or Croup, occupies the eighth place. The whole amount of deaths during twenty years, from this very prevalent affection, is one thousand and thirty, being to the whole number of deaths under puberty from other diseases, as one in twenty-two. The number under the first year, is four hundred and thirty-five; between the first and second two hundred and forty-three; between the second and fifth, two hundred and seventy-four; after which, the diminution is so great, that but one is reported as having died during the whole period between the ages of ten and twenty.

The same observations are likewise applicable in a general way, to *Hooping Cough*, with regard to which no further comment seems necessary in this place.

TABLE IX.

In this table an estimate is given of the proportion of deaths in Philadelphia, to the population. The calculations are made to embrace the period between 1807 and 1820, as in the first of these years, the reports of deaths began, and in 1820, the last census by order of the general government was taken, there being no provision in Pennsylvania for taking a regular state census. Unwilling to rest our calculations upon conjecture, we shall estimate the population no further than the data are certain. To reckon the increase at the rate which subsisted between the years 1810 and 1820, would certainly lead to a false result, inasmuch as the intermediate period was one of almost constant commercial distress and embarrassment, directly calculated to repress the growth of population.

The estimate of inhabitants in this statement, has therefore been formed upon the official returns made to the general government, which give for those parts of the town from which returns of interments are made, in

1800 - - - - -	71,378
1810 - - - - -	98,282
1820 - - - - -	121,980

The amount for each intermediate year has been calculated upon the supposition that the increase took place in a regular ratio. The smallest number of deaths in proportion to the population was 1 out of 56.53, in the year 1815: the greatest 1 in 38.25, in 1820. The average proportion for the whole series of fourteen years, is 1 death in 47.86 inhabitants.

In this calculation no regard has been paid to the difference existing between the mortality of the whites and blacks, which it will be presently seen, is such as to lessen considerably the average proportion for the white population.

It is only from the year 1821, that we find a distinction of colour made in the bills of mortality. As therefore we have not the power of ascertaining the precise rate at which the black population has increased since that time, in order to estimate the proportion of deaths to the number of inhabitants, we are compelled to appeal to conjecture for some of the data, or to abandon altogether this most interesting subject. To take as a basis the rate at which the black population increased between 1810 and 1820, might lead to much incorrectness, since in this period, owing to the existence of extraordinary circumstances, among which we may mention the epidemic of 1818, 1819, the increase was less than in former years. This is shown by refering to the last censuses, which give the number of blacks for the city and suburbs as follows:

In 1800 - - - - - -	6,467
1810 - - - - - -	9,913
1820 - - - - - -	11,384

Thus we find the increase between 1800 and 1810, amount to 37.7 per cent. or at an average of 3.7 per cent. per annum, whilst in the ten succeeding years it is only 14.8 per cent. or 1.48 per cent. per annum. Reckoning the increase since 1820, notwithstanding the late emigration to Hayti, at the rate of two per cent. per annum, the estimate of black population and the comparative proportion of its mortality would stand as follows:

Year.	No. of Deaths per annum.	Population per annum.	Proportion of deaths to population as 1 in—
1821	686	11,611	16
1822	560	11,843	21
1823	800	12,079	15
1824	703	12,320	17
1825	495	12,566	25
1826	529	12,817	24
	3773	73,236	118

The average proportion of the deaths of blacks to their population, according to the most favourable computation, embracing a period of six years, is 5.1 per cent.

In the city and suburbs the blacks constituted, in 1820, about 9.3 per cent. of the whole population.

Of the whole amount of deaths reported in the bills of mortality during six years, about 16 per cent. were of blacks.

If, therefore, we deduct 9.3 per cent. as the proportion of blacks, from the total of the column of population, and from that containing the whole amount of deaths, about 16 per cent. as the proportion of blacks, the average mortality would be as one death in 50.8 of the white inhabitants, that of the blacks to their population being as 1 death in 19.

TABLE X.

This table exhibits a comparative view of the mortality of males and females, both of adults and children, from the year 1811, when a distinction of sex was first made in the annual reports, to the year 1826, inclusive: and likewise the number born in each year, both of males and females, since 1820, when the record of births first began.

It must be observed that the addition of the sums of males and females reported in this table, do not always make up those in the column of totals, as in some instances the distinction of sex has been omitted in the original certificates.

In the comparative estimate for sixteen years of the mortality of the sexes at all ages, that of females is on an average 23 per cent. less than that of males; being in the ratio of only 77 females to 100 males.

Of the deaths under the twentieth year, the excess of males is 18.5 per cent., being at the rate of about 81 females to 100 males; but of the whole mortality of adults, the excess of males amounts to 28 per cent., being in the proportion of only 72 women to 100 men.*

That part of the table appropriated to the *Births*, will serve to exhibit with more accuracy the relative proportion of the sexes, than to afford correct comparative estimates of the relative proportions existing between the births, deaths, and population. Leaving, therefore, all other calculations till the data shall be less equivocal, we will only observe, that the proportion of the sexes at birth is about 91 females to 100 males.

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* Calculations in England make the proportion of deaths of women to that of men as 92 to 100. This disparity in the chances of life in the sexes, affects very greatly the estimates of pecuniary interests depending upon the duration of life, so that the prices of annuities for females to enjoy whilst living, are much higher than those demanded for men. It will be evident from the data furnished in this table, that the chances of life are still more favourable to the female sex in this part of America, than they are represented to be in England.

TABLE XI.

This table exhibits the ages at which the deaths in Philadelphia have occurred in each one of a series of twenty years. Beginning with the deaths which took place under the first year of life, and ending with those between one hundred and ten and one hundred and twenty, the whole time is divided into fifteen periods,* the mortality at each of which in proportion to the whole amount, with ages designated,† is as follows:—

Under 1 year,		as 1 in	4.6
Between 1 and	2	1	11.
2	5	1	14.
5	10	1	25.
10	20	1	20.
20	30	1	8.4
30	40	1	7.6
40	50	1	9.6
50	60	1	13.
60	70	1	18.
70	80	1	27.
80	90	1	45.
90	100	1	156.
100	110	1	873.
110	120	1	7363.

The statement contained in this table of the periods of life, at which each of fifty-one thousand five hundred and forty-four individuals of all ages and conditions died, constitutes the best foundation we possess for an estimate of the *mean duration of human life*, in

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* Another period, namely, between the tenth and twentieth years, has of late been introduced into the bills of mortality, but it is thought best to continue the table with the distinctions first established.

† Of the whole amount of deaths reported during twenty years, viz. fifty-three thousand and four, there were one thousand four hundred and sixty, whose ages were unknown, leaving the number of deaths with ages designated, fifty-one thousand five hundred and forty-four.

Philadelphia at this epoch. The sum of the ages at which the deaths occurred, divided by the number of the deceased, gives 29.35 years as the mean duration. This is the result of an average of twenty years, the mean of each of which is given in the column next to that containing the amount of deaths for each year. It is interesting to observe the variations in the successive years occasioned by the greater or less mortality of children.*

It is a rule applicable to calculations of this nature, that the multiplicity of observations destroy the operation of accidental circumstances, and establish those depending upon certain and regular causes.

It is therefore evident, that had the number of observations of the ages at which deaths occurred been greater, the mean value would have been so much the more accurate.

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* The ancient Romans kept with much exactness registers or tables, showing the births, sex, periods of puberty, manhood, age at death, diseases, &c. Domitius Ulpianus, prime minister to Alexander Severus, estimated from these records the mean duration of human life in ancient Rome in his time, at thirty years.

the Spring of 1820, *inclusive.*

Spring Mo	Mean Temperature.‡	Winter Months.	Lowest Fall.*	Highest Rise.†	Mean Temperature.‡
1811 Ma	70	December	18	52	36
Ap	60	January (1212)	6	41	28
Ma	45	February	14	45	30
1812 Ma	60	December	23	48	30
A	54	January (1813)	12	50	30
Ma	40	February	20	40	32
1813 Ma	62	December	26	44	32
Ap	50	January (1814)	18	40	31
Ma	41	February	19	49	34
1814 Ma	65	December	20	47	30
Ap	50	January (1815)	10	46	30
Ma	45	February	15	40	30
1815 Ma	60	December	16	56	32
Ap	54	January (1816)	6	46	30
Ma	42	February	8	58	32
1816 Ma	62	December	27	64	35
Ap	54	January (1817)	19	51	30
Ma	50	February	4	50	25
1817 Ma	70	December	10	54	40
Ap	55	January (1818)	11	48	32
Ma	55	February	9	54	30
1818 Ma	65	December	17	52	30
Ap	65	January (1819)	19	51	35
Ma	50	February	22	60	40
1819 Ma	70	December	21	50	40
Ap	55	January (1820)	11	40	30
Ma	48	February	14	69	35

* Taken 3 o'clock P. M.

‡ Estimat extremes of temperature.

N. B. Fa

TABLE I.

Thermometrical Observations made in Philadelphia, from the Spring of 1811, *to the Spring of* 1820, *inclusive.*

Spring Months.		Lowest Fall.*	Highest Rise.†	Mean Temperature.‡	Summer Months.	Lowest Fall.*	Highest Rise.†	Mean Temperature.‡	Autumnal Months.	Lowest Fall.*	Highest Rise.†	Mean Temperature.‡	Winter Months.	Lowest Fall.*	Highest Rise.†	Mean Temperature.‡
1811	March	28	69	40	June	62	86	70	September	59	83	70	December	18	52	36
	April	35	70	48	July	72	93	80	October	43	79	60	January (1212)	6	41	28
	May	46	76	60	August	66	86	73	November	34	56	45	February	14	45	30
1812	March	22	60	38	June	61	82	70	September	49	77	60	December	23	48	30
	April	32	75	45	July	60	83	72	October	40	71	54	January (1813)	12	50	30
	May	42	75	50	August	60	80	70	November	28	63	40	February	20	40	32
1813	March	24	54	40	June	58	86	74	September	56	85	62	December	26	44	32
	April	40	70	55	July	63	89	70	October	35	64	50	January (1814)	18	40	31
	May	48	75	58	August	64	85	72	November	30	59	41	February	19	49	34
1814	March	21	57	36	June	58	78	68	September	51	82	65	December	20	47	30
	April	40	66	50	July	60	85	70	October	38	77	50	January (1815)	10	46	30
	May	53	78	61	August	60	85	72	November	31	65	45	February	15	40	30
1815	March	29	60	40	June	62	89	70	September	50	84	60	December	16	56	32
	April	41	72	53	July	68	92	80	October	41	64	54	January (1816)	6	46	30
	May	50	78	60	August	63	90	78	November	31	65	42	February	8	58	32
1816	March	14	70	40	June	50	90	70	September	56	83	62	December	27	64	35
	April	33	75	45	July	66	78	70	October	52	67	54	January (1817)	19	51	30
	May	38	76	58	August	64	87	70	November	34	74	50	February	4	50	25
1817	March	28	60	35	June	55	85	70	September	50	84	70	December	10	54	40
	April	40	80	50	July	64	87	78	October	39	68	55	January (1818)	11	48	32
	May	50	79	60	August	59	86	75	November	31	73	55	February	9	54	30
1818	March	25	68	42	June	64	92	75	September	50	82	65	December	17	52	30
	April	40	64	50	July	71	97	79	October	40	73	65	January (1819)	19	51	35
	May	43	84	60	August	65	86	70	November	36	65	50	February	22	60	40
1819	March	21	66	47	June	56	91	75	September	54	88	70	December	21	50	40
	April	34	79	55	July	67	92	78	October	38	76	55	January (1820)	11	40	30
	May	50	82	62	August	63	94	75	November	29	67	48	February	14	69	35

* Taken at 8 o'clock A. M. in the shade and open air.

† Taken at 3 o'clock P. M.

‡ Estimated by observing the temperature at sunrise in the shade and open air, and at 3 o'clock P. M. the two extremes of temperature.

N. B. Fahrenheit's thermometer was used in making the above observations.

Abst of the General Government, showing the
eturns of Interments are made.

WA R	COLOURED POPULATION.								Others untaxed.	Total population of the Wards and Districts.
	MALES.				FEMALES.					
	Under 14 years.	Of 14 and under 26.	Of 26 and under 45.	Of 45 and upwards.	Under 14 years.	Of 14 and under 26.	Of 26 and under 45.	Of 45 and upwards.		
City	1052	674	1079	351	1172	1323	1374	554	1203	63802
Passy	4	25	11	4	19	13	1			1638
Kens	17	16	13	16	23	18	22	15		7118
North	174	66	112	76	140	119	136	75		19678
D	19	5	8	8	12	11	7	3		1810
Penn	24	15	18	10	26	22	20	11		3105
Moya	217	57	223	95	117	81	285	99		3963
South	175	56	190	12	187	134	248	30		14713
Sprin	18	10	11	1	20	13	13	5	4	3498
Block	36	28	20	9	21	34	19	7		2655
	1736	952	1685	582	1737	1768	2125	799	1207	121980

TABLE II.

Abstract from the Census of the City and County of Philadelphia, taken in 1820, *by order of the General Government, showing the number and description of Inhabitants in the Wards and Districts, from which returns of Interments are made.*

WARDS AND INCORPORATED DISTRICTS.	WHITE POPULATION.											Foreigners not naturalized.	Number of persons engaged in Horticulture.	Number of persons engaged in Commerce.	Number of persons engaged in Manufactures.	COLOURED POPULATION.								Others untaxed.	Total population of the Wards and Districts.
	MALES.						FEMALES.									MALES.				FEMALES.					
	Under 10 years.	Of 10 and under 16.	Between 16 and 18.	Of 16 and under 26.	Of 26 and under 45.	Of 45 and upwards.	Under 10 years.	Of 10 and under 16.	Of 16 and under 26.	Of 26 and under 45.	Of 45 and upwards.					Under 14 years.	Of 14 and under 26.	Of 26 and under 45.	Of 45 and upwards.	Under 14 years.	Of 14 and under 26.	Of 26 and under 45.	Of 45 and upwards.		
City Wards, - -	7247	3305	1562	5921	6332	2980	7155	4160	7215	7065	3637	777	156	2984	6100	1052	674	1079	351	1172	1323	1374	554	1203	63802
Passyunk Incorporation,	257	151	70	185	142	105	183	139	167	141	91	5	643		28	4	25	11	4	19	13	1			1638
Kensington Do. -	1216	467	126	532	837	401	1180	483	647	748	467	163	12	15	512	17	16	13	16	23	18	22	15		7118
Northern Liberties, Wards,	2945	1108	448	1717	2017	1026	2888	1284	2112	2299	1384	92	7	318	1866	174	66	112	76	140	119	136	75		19678
Do. Incorporation,	270	132	38	153	160	136	280	119	191	177	119	76	223	9	159	19	5	8	8	12	11	7	3		1810
Penn - - Do.	484	190	61	312	344	195	429	199	334	313	158	418	401	37	469	24	15	18	10	26	22	20	11		3105
Moyamensing - Do.	448	213	51	186	369	147	477	162	186	409	192	29	280	98	218	217	57	223	95	117	81	285	99		3963
Southwark - Do.	2307	951	317	868	1856	353	2085	997	1372	2167	725	208	34	131	898	175	56	190	12	187	134	248	30		14713
Spring Garden Do.	589	664	91	350	307	136	545	321	404	314	173	9		17	199	18	10	11	1	20	13	13	5	4	3498
Blockley - Do.	356	169	62	245	298	163	377	172	249	301	151	94	153	17	119	36	28	20	9	21	34	19	7		2655
	16119	6950	8826	10469	12662	5642	15599	8036	12877	13934	7097	1871	1909	3626	10568	1736	952	1685	582	1737	1768	2125	799	1207	121980

1827, *inclusive: containing the amount for each year, and*

Croup.	Hooping Cough.	Measles.	Small Pox.	Asthma.	Apoplexy.	Palsy.	Insanity.	Drunkenness.	Suicide.	Cancer.	Gravel and Stone.	Parturition and Child-bed.	Epilepsy.	Still-born.
55	17		32	16	30	18	31	14	9	9	4	12	5	84
53	11	73	145	4	34	17	25	5	4	9	1	4	12	126
33	96		101	12	31	25	13	8	5	9	1	1	8	120
49	32	1	33	11	31	10	29	12	6	7	3	1	5	139
40	54	2	117	8	46	28	32	8	2	12	2	5	4	137
20	24	20		7	17	23	30	4	3	4	1	3	4	142
34	29	1		13	29	14	25	3	1	7	5	4	3	66
22	23	9		5	25	18	22	5	5	19	2	6	7	96
20	6	7		7	50	21	36	7	6	9	3	7	5	97
30	46	2	97	16	36	22	27	8	8	14	4	9	5	94
22	21		52	8	25	32	24	17	2	17	2	5	3	110
48	6		8	8	40	37	41	10	1	7	2		9	156
80	151	108	1	15	57	20	28	24	3	17	3		13	145
89	11	47		11	44	36	20	31	4	23		1	18	185
63	36			6	49	40	28	22	7	14	4	6	14	211
73	38			15	41	28	24	[a]66	6	18		4	3	257
67	79	156	160	7	54	39	17	[b]65	6	19	1		14	228
84	42	102	325	7	50	47	23	[c]75	2	17	3	8	7	115
75	40	38	6	21	61	42	24	[d]95	9	19	3	10	13	273
84	43	101	3	8	50	31	16	[e]83	13	19	2.	4	16	306
41	805	667	1080	205	800	548	515	558	102	272	46	90	175	3087

separate column.
of most frequent prevalence.

TABLE III.

Statement of Deaths in Philadelphia for a series of twenty years, viz: from January 1st, 1807, to January 1st, 1827, inclusive: containing the amount for each year, and number which occurred from the most prevailing Diseases.

Year.	Whole number of Deaths.*	Diseases of the Lungs.			Fevers.					Inflammations.									Dropsies.				Bowel Complaints.			Convulsions.	Croup.	Hooping Cough.	Measles.	Small Pox.	Asthma.	Apoplexy.	Palsy.	Insanity.	Drunkenness.	Suicide.	Cancer.	Gravel and Stone.	Parturition and Child-bed.	Epilepsy.	Still-born.
		Consumption.	Acute Affections.	Total.	Bilious and Remittent.	Nervous and Typhus.	Yellow and Malignant.	Type not designated.	Total.†	Brain.	Lungs and Chest.	Stomach, Bowels, and Peritoneum.	Liver.	Spleen.	Bladder and Kidneys.	Uterus.	Heart and Pericardium.	Total.	Brain or Head.	Chest.	Not designated.	Total.	Cholera.	Diarrhœa and Dysentery.	Total.																
1807	1961	306	93	399	31	44	3	53	131	12	93	29	9		2			145	48	20	54	122	189	145	334	127	55	17		32	16	30	18	31	14	9	9	4	12	5	84
1808	2145	301	101	402	45	35		71	151	22	101	34	25					182	52	18	67	137	230	114	344	145	53	11	73	145	4	34	17	25	5	4	9	1	4	12	126
1809	1884	311	65	376	52	62		24	138	11	65	50	12					138	40	41	34	115	153	57	210	170	33	96		101	12	31	25	13	8	5	9	1	1	8	120
1810	1897	306	85	391	32	46	3	52	133	16	85	63	20		1			184	44	43	42	129	206	45	251	183	49	32	1	33	11	31	10	29	12	6	7	3	1	5	139
1811	2249	369	77	446	37	54	5	45	141	14	77	45	26					162	47	35	75	157	240	83	323	162	40	54	2	117	8	46	28	32	8	2	12	2	5	4	137
1812	2017	339	74	413	29	40	3	43	115	11	74	63	14					162	50	15	49	114	157	44	201	177	20	24	20		7	17	23	30	4	3	4	1	3	4	142
1813	2223	216	61	277	30	107	6	50	193	8	61	54	18					141	38	18	42	98	178	100	278	166	34	29	1		13	29	14	25	3	1	7	5	4	3	66
1814	2041	274	71	345	16	107	7	37	167	11	71	44	24					150	40	29	35	104	127	91	218	174	22	23	9		5	25	18	22	5	5	19	2	6	7	96
1815	1943	347	135	482	40	92	2	44	178	21	135	50	21					227	65	19	53	137	94	77	171	180	20	6	7		7	50	21	36	7	6	9	3	7	5	97
1816	2225	434	149	583	39	84	2	68	193	23	149	35	18		4			229	83	21	52	156	90	63	153	167	30	46	2	97	16	36	22	27	8	8	14	4	9	5	94
1817	2107	349	96	445	37	101	4	69	211	21	96	60	26		2			205	65	20	64	149	137	92	229	167	22	21		52	8	25	32	24	17	2	17	2	6	3	110
1818	2609	396	74	470	89	322		81	492	22	74	76	21		2			195	67	5	99	171	203	80	283	141	48	6		8	8	40	37	41	10	1	7	2		9	156
1819	2979	459	131	690	92	133	13	39	277	33	131	78	20		3			265	92	8	131	231	260	103	363	201	80	151	108	1	15	57	20	28	24	3	17	3		13	145
1820	3189	446	141	586	231	123	73	99	526	41	141	57	27	1	6	3		275	115	17	77	209	263	191	454	162	89	11	47		11	44	36	20	31	4	23		1	18	185
1821	2161	438	121	559	211	117		74	402	29	134	69	46		6	2	3	289	99	22	73	194	191	189	380	158	63	36			6	49	40	28	22	7	14	4	6	14	211
1822	3334	488	124	612	223	149		126	498	47	124	76	29	2	5	1	1	284	120	36	87	243	212	249	461	179	73	38			15	41	28	24	[a]66	6	18		4	3	257
1823	4372	536	141	677	253	243		248	744	46	141	106	37	2	5	1	1	339	147	47	81	241	265	297	562	214	67	79	156	160	7	54	39	17	[b]65	6	19	1		14	228
1824	4284	576	178	760	169	317		161	647	66	178	119	35		2	2		402	124	29	68	221	164	133	297	368	84	42	102	325	7	50	47	23	[c]75	2	17	3	8	7	115
1825	3539	519	145	664	147	91	1	123	362	64	145	81	36	2	8	2		338	140	40	90	270	209	153	362	237	75	40	38	6	21	61	42	24	[d]95	9	19	3	10	13	273
1826	3845	587	222	809	194	104		123	421	60	222	102	54	2	3	2	2	447	126	38	78	242	244	171	415	258	84	43	101	3	8	50	31	16	[e]83	13	19	2	4	16	306
Totals.	53004	7977	2284	10281	1998	2371	122	1629	6120	583	2284	1291	518	9	49	13	7	4758	1603	521	1351	3474	3812	2477	6289	3731	1041	805	667	1080	205	800	548	515	558	102	272	46	90	175	3087

* The sums in this column include all the deaths per annum, except such as were reported under the head of *Still-born*, which are given in a separate column.

† Scarlet, puerperal, and some other fevers under different designations, are not embraced in this total, which is meant to include those only of most frequent prevalence.

[a] Including 41 returned mania a potu.—[b] 31 do.—[c] 53 do.—[d] 64 do.—[e] 55 do.

Summary of Adults and Children, including Still-born,

	Januaryember.				October.			November.			December.		
	Adults.	Children.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.
1807	92	58	97	237	108	54	162	101	54	155	71	44	115
1808	91	45	97	185	71	83	154	81	71	152	59	62	121
1809	73	57	80	167	91	85	176	83	106	189	63	76	139
1810	82	67	82	173	104	89	193	86	66	152	87	79	166
1811	79	69	92	196	131	107	238	100	95	195	100	74	174
1812	114	89	108	167	51	42	93	51	44	95	36	28	64
1813	77	52	94	179	66	45	111	57	39	96	61	54	115
1814	49	49	62	135	85	47	132	87	70	157	86	50	136
1815	88	43	85	175	105	64	169	119	58	177	122	67	189
1816	99	82	106	206	97	95	192	82	60	142	98	55	153
1817	98	59	108	233	86	60	146	94	48	142	112	38	150
1818	163	72	118	223	95	74	169	139	59	198	120	76	196
1819	120	72	161	288	103	139	242	102	152	254	96	151	247
1820	96	135	144	315	178	133	311	136	92	228	131	110	241
1821	114	87	121	267	175	121	296	164	126	290	129	93	222
1822	158	114	174	378	231	122	353	163	127	290	173	133	306
1823	186	128	272	551	235	222	457	240	205	445	305	216	521
1824	272	166	181	391	192	122	314	165	126	291	125	156	281
1825	145	144	152	315	126	123	249	160	124	284	156	142	298
1826	194	134	174	358	230	167	397	144	145	289	122	116	238
Totals.	2390	1722	4508	5139	2560	1994	4554	2354	1867	4221	2252	1820	4072

TABLE IV.

Summary of the Deaths in Philadelphia for each month in a series of twenty years, with the number of Adults and Children, including Still-born, according to the annual reports of the Board of Health.

	January.			February.			March.			April.			May.			June.			July.			August.			September.			October.			November.			December.		
	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.
1807	92	58	150	73	45	118	109	45	154	111	46	157	90	43	133	91	68	159	101	136	237	117	151	268	140	97	237	108	54	162	101	54	155	71	44	115
1808	91	45	136	73	50	123	91	63	154	96	73	169	81	98	179	95	132	227	111	263	374	109	188	297	88	97	185	71	83	154	81	71	152	59	62	121
1809	73	57	130	67	51	118	95	46	141	80	56	136	66	84	150	82	102	184	53	131	184	183	107	290	87	80	167	91	85	176	83	106	189	63	76	139
1810	82	67	149	82	70	152	87	40	127	96	56	152	99	65	164	68	79	147	63	129	192	91	178	269	91	82	173	104	89	193	86	66	152	87	79	166
1811	79	69	148	79	78	157	102	87	189	95	60	155	105	74	179	97	80	177	125	126	251	124	203	327	104	92	196	131	107	238	100	95	195	100	74	174
1812	114	89	203	98	59	157	87	63	150	128	77	205	85	59	144	76	69	145	68	92	160	60	155	215	59	108	167	51	42	93	51	44	95	36	28	64
1813	77	52	129	54	28	82	70	59	129	93	59	152	82	38	120	60	58	118	54	114	168	85	148	233	85	94	179	66	45	111	57	39	96	61	54	115
1814	49	49	98	61	41	102	79	48	127	101	80	181	57	69	126	71	65	136	67	104	171	122	160	282	73	62	135	85	47	132	87	70	157	86	50	136
1815	88	43	131	70	52	122	116	66	182	113	49	162	99	58	157	126	71	197	78	75	153	124	102	226	90	85	175	105	64	169	119	58	177	122	67	189
1816	99	82	181	118	83	201	105	88	193	109	69	178	108	75	183	135	91	226	131	97	228	113	123	236	100	106	206	97	95	192	82	60	142	98	55	153
1817	98	59	157	89	81	170	106	79	185	131	76	207	140	73	213	119	76	195	86	113	199	107	123	230	125	108	233	86	60	146	94	48	142	112	38	150
1818	163	72	235	150	61	211	151	89	240	161	75	236	138	66	204	149	71	220	143	178	321	137	175	312	105	118	223	95	74	169	139	59	198	120	76	196
1819	120	72	192	106	89	195	141	118	259	117	97	214	120	84	204	121	138	259	122	216	338	136	296	432	127	161	288	103	139	242	102	152	254	96	151	247
1820	96	135	231	99	97	196	127	136	263	138	101	239	113	83	196	126	112	238	124	217	341	262	321	583	171	144	315	178	133	311	136	92	228	131	110	241
1821	114	87	201	114	101	215	134	105	239	126	98	224	143	102	245	151	106	257	169	95	264	200	252	452	146	121	267	175	121	296	164	126	290	129	93	222
1822	158	114	272	120	94	214	143	92	235	124	86	210	142	122	264	139	119	258	173	268	441	175	195	370	204	174	378	231	122	353	163	127	290	173	133	306
1823	186	128	314	158	96	254	122	85	207	177	113	290	116	94	210	160	210	370	183	303	486	205	290	495	279	272	551	235	222	457	240	205	445	305	216	521
1824	272	166	438	318	201	519	250	230	480	199	143	342	163	126	289	171	181	352	141	173	314	160	228	388	210	181	391	192	122	314	165	126	291	125	156	281
1825	145	144	289	147	86	233	216	147	363	140	91	231	139	128	267	156	203	359	254	296	550	182	192	374	163	152	315	126	123	249	160	124	284	156	142	298
1826	194	134	328	191	148	339	149	205	354	190	200	390	138	127	265	139	186	325	183	332	515	153	200	353	184	174	358	230	167	397	144	145	289	122	116	238
Totals.	2390	1722	4112	2267	1611	3878	2480	1891	4371	2525	1705	4230	2224	1668	3892	2332	2217	4549	2429	3458	5887	2845	3787	6632	2631	2508	5139	2560	1994	4554	2354	1867	4221	2252	1820	4072

TABLE V.

Statement of the Deaths in Philadelphia from the principal Diseases, for a period of twenty years, viz: from January 1st, 1807, to January 1st, 1827; together with the ages at which they took place.

NAMES OF DISEASES.	Under 1 year.	Between 1 and 2	Between 2 and 5.	Between 5 and 10.	Between 10 and 20.	Between 20 and 30	Between 30 and 40.	Between 40 and 50.	Between 50 and 60.	Between 60 and 70.	Between 70 and 80.	Between 80 and 90.	Between 90 & 100.	Between 100 & 110.	Between 110 & 120.	Unknown.	Totals.
Abscess	13	7	10	15	11	46	54	31	23	14	5					4	233
Aneurism	1		1		6	6	11	10	8	3	1						47
Angina Pectoris	8		5	8	9	11	15	11	8	2							77
Anthrax									1	2	1						4
Apoplexy	12	8	10	5	14	68	122	154	154	131	80	30	4	1		7	800
Apthæ or Thrush	41	8	1	2				3		1							56
Asthma	13	4	9	4	8	10	29	25	20	34	33	12	4				205
Atrophy, Tabes and Marasmus,	186	61	47	14	19	18	36	33	40	42	32	11	3				542
Bowel Complaints, viz: Cholera,	2122	1186	268	52	11	25	35	31	25	21	11	4				21	3812
Diarrhœa and Dysentery	513	382	254	125	99	176	215	186	193	155	107	43					2477
Burns and Scalds	29	37	78	39	14	21	18	11	7	11	4	1	1	1		3	275
Cancer and Scirrhus			4	1	3	17	41	69	54	37	26	15			1	1	272
Spina Bifida	12		5	4	6		2	1									30
Tumours	1		2		5	5	2	4	2	5							26
Teething	108	103	41	3													255
Tetanus	13	1	6	13	22	24	28	12	2	2						2	125
Ulcers	10	1	7	4	6	10	12	9	11	9	2	2	3			3	89
Worms	25	54	102	54	8			1			1					2	247

TABLE V.

Statement of the Deaths in Philadelphia from the principal Diseases, for a period of twenty years, viz: from January 1st, 1807, to January 1st, 1827; together with the ages at which they took place.

NAMES OF DISEASES.	Under 1 year.	Between 1 and 2	Between 2 and 5.	Between 5 and 10.	Between 10 and 20.	Between 20 and 30	Between 30 and 40.	Between 40 and 50.	Between 50 and 60.	Between 60 and 70.	Between 70 and 80.	Between 80 and 90.	Between 90 & 100.	Between 100 & 110.	Between 110 & 120.	Unknown.	Totals.
Abscess	13	7	10	15	11	46	54	31	23	14	5					4	233
Aneurism	1		1		6	6	11	10	8	3	1						47
Angina Pectoris	8		5	8	9	11	15	11	8	2							77
Anthrax									1	2	1						4
Apoplexy	12	8	10	5	14	68	122	154	154	131	80	30	4	1		7	800
Apthæ or Thrush	41	8	1	2				3		1							56
Asthma	13	4	9	4	8	10	29	25	20	34	33	12	4				205
Atrophy, Tabes and Marasmus,	186	61	47	14	19	18	36	33	40	42	32	11	3				542
Bowel Complaints, viz: Cholera,	2122	1186	268	52	11	25	35	31	25	21	11	4				21	3812
Diarrhœa and Dysentery	513	382	254	125	99	176	215	186	193	155	107	43					2477
Burns and Scalds	29	37	78	39	14	21	18	11	7	11	4	1	1	1		3	275
Cancer and Scirrhus			4	1	3	17	41	69	54	37	26	15			1	1	272
Catarrh	261	78	63	12	7	20	36	13	16	17	14	5	2			2	546
Colic	26	10	3	2	9	21	36	30	29	11	18	3		1		3	202
Consumption	185	143	167	140	510	1842	1986	1401	774	431	211	64	4			119	7977
Convulsions	2556	387	249	105	56	101	100	62	40	18	10	6		1		42	3731
Childbed and Parturition					5	39	35	8								3	90
Debility and Decay	1072	243	167	87	70	141	240	247	256	282	247	129	18	2		72	3273
Diabetes			1		1	3		2	3	1	1						12
Disease of the Hip Joint	1	1		7	9	4	2	1				2					27
Dropsy (kind not designated)	39	27	59	30	70	141	235	241	190	169	94	43	4			8	1351
of the Brain	531	399	366	191	52	26	14	7	4	1						10	1602
of the Chest	18	19	20	21	29	63	81	84	74	51	37	10	2			13	521
Drowned	7	1	6	86	94	126	148	90	37	13	3	1				26	642
Drunkenness and Mania a potu					4	98	176	157	78	33	7	1				8	558
Epilepsy	16	4	14	6	24	19	33	31	20	3	1	2				2	175
Fever, Puerperal					10	107	59	12								2	190
Scarlet	8	11	37	17	20	5	2	2									102
Other kinds	209	154	293	262	578	1348	1286	1038	693	373	214	64	14	3	1	33	6564
Fungus Hæmatodes						1				1	1	1					4
Gangrene and Mortification	60	24	55	25	19	33	40	41	29	33	28	18	3	1		4	413
Gout						3	7	9	21	18	11	4				1	74
Gravel and Stone	2	1	2	3	2	1	3	6	9	7	6	3	1				46
Hernia	2		1			6	4	7	11	12	6	3				1	53
Hives or Croup	435	243	274	77	1	3		3		1	1	1				2	1041
Hooping Cough	325	241	191	42	4	1											804
Hæmorrhage (of all kinds)	19	2	7	9	28	45	55	43	29	18	6	7	3	1		2	274
Hydrophobia				2	3	2		1	2								10
Icterus or Jaundice	31	1	1	4		11	12	12	11	5	3					1	92
Insanity					3	101	184	111	64	29	14	2				7	515
Influenza	8	3	1	1	2	2	6	5	6	6	7	3		1		2	53
Inflammation of the Brain	72	43	65	64	75	79	84	45	23	23	4	2				4	583
Lungs and Chest	392	183	142	60	90	230	312	311	213	180	110	36	5	1		20	2284
Stomach and Bowels	297	116	72	63	72	155	144	109	76	58	38	9	2			3	1214
Liver	37	21	10	17	9	80	109	92	80	37	19	5				2	518
Bladder	5		1		3	6	5	6	13	2	7	1					49
Heart and Pericardium			1			2	1	1		1	1						7
Spleen	1				1	3		2	1	1							9
Uterus and Peritoneum	3		1	3	6	28	21	7	3	4							76
Erysipelatous	64	10	7	3	8	8	19	21	10	7	2	3					162
Measles	121	237	215	71	10	6	3	2								2	667
Old Age										28	260	515	240	42	4		1089
Palsy	4	5	2	3	14	26	45	76	106	113	106	42	2			4	548
Rickets and Curved Spine	1	5	3	1			3	1								1	15
Rheumatism	1	1	3	1	16	15	21	25	15	22	12	5				2	139
Scrofula	35	36	41	31	34	26	35	10	10	10	2					1	269
Small Pox	150	123	175	121	71	168	134	71	22	5	4					36	1080
Sore Throat	98	49	76	43	16	16	15	15	11	8	4	2				2	355
Sudden	74	11	10	24	8	95	209	137	122	63	19	6	3			17	798
Suicide					5	24	30	21	13	4	1	1				3	102
Syphilis	18	5	3	2	4	48	33	16	4	2							136
Spina Bifida	12		5	4	6		2	1									30
Tumours	1		2		5	5	2	4	2	5							26
Teething	108	103	41	3													255
Tetanus	13	1	6	13	22	24	28	12	2	2						2	125
Ulcers	10	1	7	4	6	10	12	9	11	9	2	2	3			3	89
Worms	25	54	103	54	8			1			1					2	247

TABLE VI.

Showing the proportion of Deaths in Philadelphia by each of the most frequent Diseases, to the whole number of Deaths; estimated from a series of twenty years, and arranged so as to form a scale of mortality.

Order of Mortality.	DISEASES.	Whole Number of Deaths.	Being to the whole amount of Deaths as 1 in—	Whole number of Deaths from Diseases of a similar class.	Proportion of Deaths from Diseases of a similar class to the whole number of Deaths, as 1 in—
1	Consumption - - -	7977	6.6		
2	Bowel Complaints; viz. Cholera - - - -	3812	13.9	6289	8.4
	—— Dysentery and Diarrhœa	2477	21.4		
3	Fevers; viz. Puerperal -	190	278.		
	—— Scarlet - - -	102	519.5		
	—— Typhus, Remittent, and other kinds - - -	6564	8.		
4	Inflammations; viz. of the Lungs and Chest - -	2284	23.2	4758	11.1
	—— Stomach and Bowels	1214	43.6		
	—— Brain - - -	583	90.1		
	—— Liver - - -	518	102.3		
	—— Uterus and Peritoneum	76	695.5		
	—— Kidneys and Bladder	49	1081.7		
	—— Heart, Pericardium and Spleen - - - - -	18	2944.6		
	—— Erysipelatous - -	162	327.1		
5	Convulsions - - -	3731	14.2		
6	Dropsy (kind not designated)	1351	39.2	3474	15.2
	—— of the Brain - -	1602	33.		
	—— of the Chest - -	521	101.7		
7	Debility and Decay - -	3273	16.2		
8	Old Age - - - -	1089	48.6		
9	Small Pox - - - -	1080	49.		
10	Hives or Croup - - -	1041	50.9		
11	Hooping Cough - - -	804	63.1		
12	Apoplexy - - - -	800	66.2		
13	Sudden - - - -	798	66.4		
14	Measles - - - -	667	79.5		
15	Catarrh - - - -	546	97.		
16	Atrophy, Tabes and Marasmus	542	97.8		
17	Gangrene and Mortification	413	130.7		
18	Sore Throat - - -	355	149.3		
19	Burns and Scalds - -	275	192.7		
20	Hæmorrhage of all kinds -	274	193.4		
21	Cancer and Scirrhus - -	272	198.8		
22	Asthma - - - -	205	258.5		
23	Cholic - - - -	202	262.4		
24	Epilepsy - - - -	175	302.8		
25	Rheumatism - - -	139	381.3		
26	Syphilis - - - -	136	389.7		
27	Tetanus or Locked Jaw -	125	424.		
28	Suicide - - - -	102	519.6		
29	Parturition and Childbed -	90	588.9		

TABLE VII.

Statement of the Mortality in Philadelphia, from those Diseases which occur most commonly under the age of puberty with the number of Deaths which took place in each year of a series of twenty years.

Years.	Bowel Compl.			Convulsions.	Dropsies.			Inflammations.						Debility and Decay.	Fevers.		Consumption.	Hives or Croup.	Hooping Cough.	Measles.	Catarrh.	Atrophy, Tabes, and Marasmus.	Sore Throat.	Teething.	Worms.	Gangrene and Mortification.	Epilepsy.	Tetanus.
	Cholera.	Diarrhœa and Dysentery.	Whole number of Bowel Complaints.		Of the Brain.	Of the Chest.	Of all kinds.	Of the Lungs.	Stomach & Bowels.	Brain.	Liver.	Erysipelas.	Of every kind.		Scarlet.	All others.												
1807	183	72	255	127	44	4	54	24	20	4	1	2	51	28	1	39	36	54	17		1	19	5	10	37	7	2	6
1808	217	68	285	118	44		51	37	16	9	7	3	72	41	2	38	53	51	11	71	19	22	6	10	18	9	4	5
1809	147	51	198	146	36	6	45	17	25	6	1	2	51	24	3	36	45	31	95		8	7	5	15	13	4	2	3
1810	201	29	230	167	41	14	60	25	21	7	5		58	42	2	39	33	46	32	1	3	7	12	7	15	5	1	1
1811	224	24	248	134	35	9	57	30	22	4	4	3	63	40	2	59	47	40	52	2	6	7	20	20	10	11	4	3
1812	154	27	181	163	48	4	56	21	49	11	3	4	88	30	1	33	50	20	24	20	16	10	14	11	8	10		
1813	173	59	232	157	37	6	49	18	33	4	8	2	65	28		59	17	34	29		2	8	12	9	8	3	2	2
1814	125	43	168	162	39	1	45	25	28	4	7	4	68	33		45	51	21	21	8	11	15	10	10	4	7	3	1
1815	92	43	135	168	60	9	78	25	19	19	7	1	71	44		44	107	19	6	7	11	10	11	8	9	4	3	2
1816	87	26	113	147	80	2	89	50	18	9	4	8	89	51		34	58	38	45	2	40	15	10	23	12	9	1	
1817	130	60	190	157	61	8	77	29	29	10	2	4	74	35		38	64	21	21		20	14	9	26	14	6		2
1818	196	36	232	123	67		82	33	43	14	3	4	97	62	1	50	42	48	6		10	34	16	17	7	6	1	
1819	246	55	301	184	89	2	125	66	32	22	3	4	127	100	2	70	66	80	150	106	24	33	24	13	11	12	5	2
1820	249	117	366	152	114	6	134	79	25	27	3	7	141	115	30	146	75	87	11	47	24	15	16	4	9	11	6	2
1821	177	111	288	136	98	8	118	60	32	19	6	7	124	111	13	77	57	63	36		20	21	21	14	10	7	7	6
1822	200	108	308	166	117	5	130	40	41	24	6	2	123	139	8	108	64	73	38		26	17	14	11	13	9		1
1823	253	172	425	192	144	8	172	62	38	25	3	13	148	194	8	199	77	67	79	155	21	23	28	10	14	26	5	10
1824	155	76	231	336	124	9	142	93	55	35	4	9	196	163	8	134	77	84	42	99	45	10	30	11	10	14	6	4
1825	197	96	293	205	138	2	163	52	28	33	3	7	133	169	8	113	60	75	46	38	60	18	14	15	9	15	3	4
1826	233	100	333	232	123	4	143	82	46	32	14	5	179	188	4	138	56	79	42	98	54	20	5	12	6	8	9	4
Totals.	3639	1373	5012	3353	1539	107	1870	867	620	319	94	92	2018	1639	93	1496	1145	1030	803	654	421	327	282	256	243	183	64	55

TABLE VIII.

Statement of the Mortality in Philadelphia, from Diseases most incident to the early periods of Life, for a series of twenty years, viz: from January 1, 1807, to January 1, 1827; showing the proportion of Deaths from each particular disease to the whole number of Deaths under twenty years of age. The names of diseases arranged in the order of their mortality.

	NAMES OF DISEASES.	Under 1 year.	Between 1 and 2.	Between 2 and 5.	Between 5 and 10.	Between 10 and 20.	Totals.	Proportion of Deaths by individual diseases to the whole number as 1 in—
1	Cholera - - - - -	2122	1186	268	52	11	3639	6.3
	Diarrhœa and Dysentery -	513	382	254	125	99	1373	16.8
	Whole number of Bowel Complaints - - - -	2635	1568	522	177	110	5012	4.6
2	Convulsions - - - -	2556	387	249	105	56	3353	6.9
3	Inflammation of the Lungs	392	183	142	60	90	867	26.
	—— Stomach and Bowels	297	116	72	63	72	620	37.
	—— Brain - - -	72	43	65	64	75	319	73.
	—— Liver - - -	37	21	10	17	9	94	246.
	—— Erysipelatous - -	64	10	7	3	8	92	251.
	—— Other kinds - -	9		3	4	10	26	890.
	Whole number from inflammations - - - -	871	373	299	211	264	2018	11.
4	Dropsy of the Brain - -	531	399	366	191	52	1539	15.
	—— of the Chest - -	18	19	20	21	29	107	216.
	—— kinds not designated	39	27	59	30	70	225	102.
	Whole number of dropsical affections - - -	588	445	445	242	151	1871	12.
5	Debility and Decay - -	1072	243	167	87	70	1639	14.
6	Fever, Scarlet - - - -	8	11	37	17	20	93	249.
	—— Other kinds - -	209	154	293	262	578	1496	15.
7	Consumption - - -	185	143	167	140	510	1145	20.
8	Hives or Croup - - -	435	243	274	77	1	1030	22.
9	Hooping Cough - - -	325	241	191	42	4	803	28.
10	Measles - - - -	121	237	215	71	10	654	35.
11	Small Pox - - - -	150	123	175	121	71	640	36.
12	Catarrh - - - - -	261	78	63	12	7	421	55.
13	Atrophy, Tabes and Marasmus	186	61	47	14	19	327	70.
14	Sore Throat - - -	98	49	76	43	16	282	82.
15	Teething - - - -	108	103	41	3		255	90.
16	Worms - - - - -	25	54	102	54	8	243	95.
17	Burns and Scalds - -	29	37	78	39	14	197	117.
18	Gangrene and Mortification	60	24	55	25	19	183	126.
19	Scrofula - - - - -	35	36	41	31	34	177	130.
20	Sudden - - - - -	74	11	10	24	8	127	181.
21	Epilepsy - - - - -	16	4	14	6	24	64	361.
22	Abscess - - - - -	13	7	10	15	11	56	413.
23	Tetanus or Locked Jaw -	13	1	6	13	22	55	421.
24	Aphthæ or Thrush - -	41	8	1	2		52	443.
25	Icterus or Jaundice - -	31	1	1	4		37	625.
26	Syphilis - - - - -	18	5	3	2	4	32	723.
27	Spina Bifida - - -	12		5	4	6	27	857.
28	Disease of the Hip Joint -	1	1		7	9	18	1286.
29	Gravel and Stone - -	2	1	2	3	2	10	2316.
30	Hernia - - - - -	2		1			3	7720.

TABLE IX.

An Estimate of the Proportion of Deaths in the City and Suburbs of Philadelphia, to the population, for each year of a series of fourteen years; together with the average number for the whole period.

Year.	Whole No. of Deaths.	Population.	Proportion of Deaths to population as 1 in
1807	1961	89,270	45.52
1808	2145	92,190	42.97
1809	1884	95,180	50.52
1810	1897	98,282	51.80
1811	2249	100,428	44.65
1812	2017	102,619	50.87
1813	2223	104,900	47.18
1814	2041	107,149	52.49
1815	1943	109,500	56.53
1816	2225	111,900	50.29
1817	2107	114,300	54.24
1818	2609	116,800	44.74
1819	2979	119,400	40.08
1820	3189	121,980	38.25
			14) 670.13
Average proportion of Deaths to population as 1 in			47.86

TABLE X.

Statement of the Deaths of Adults and Children, Males and Females, for each of the following years; together with the Births for a part of the time.

Years.	DEATHS.						Number of Deaths per annum.	BIRTHS.		
	Male Adults.	Male Children.	Whole number of Males.	Female Adults.	Female Children.	Whole number of Females.		Males.	Females.	Whole number of Births per annum.
1811	719	562	1281	525	433	958	2239			
1812	505	419	924	417	381	798	1722			
1813	521	308	829	322	388	710	1539			
1814	540	373	913	425	289	714	1627			
1815	763	371	1134	490	284	774	1908			
1816	703	450	1153	585	399	984	1537			
1817	748	438	1186	545	379	924	2110			
1818	925	512	1437	754	441	1195	2632			
1819	795	824	1619	616	659	1275	2894			
1820	955	780	1735	740	693	1433	3168	1709	1501	3210*
1821	937	721	1658	636	588	1224	2882	2630	2417	5047
1822	1171	815	1986	763	651	1414	3400	3021	2701	5722
1823	1329	1110	2439	1031	1032	2063	4502	2977	2836	5813
1824	1017	1303	2320	1076	919	1995	4315	3062	2771	5833
1825	1119	932	2051	855	830	1685	3736	3444	3182	6626
1826	1055	1142	2197	985	962	1947	4144	3526	3219	6745

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* This amount is only for the last nine months of the year, as the registry commenced on the 1st of April, 1820.

TABLE XI.

The Ages or Periods of Life at which the Deaths in Philadelphia have occurred in each year of a series of twenty years, viz: from January 1, 1807, to January 1, 1827. The Still-born are excluded.

Years.	Under 1 year.	Between 1 and 2.	Between 2 and 5.	Between 5 and 10.	Between 10 and 20.	Between 20 and 30.	Between 30 and 40.	Between 40 and 50.	Between 50 and 60.	Between 60 and 70.	Between 70 and 80.	Between 80 and 90.	Between 90 and 100.	Between 100 and 110.	Between 110 and 120.	Whole No. of Deaths per annum.*	Average mean Duration of life for each year.
1807	295	235	121	65	79	144	236	172	139	88	79	60	11	4		1961	28.41
1808	457	284	167	98	95	212	219	186	128	98	61	30	7	2		2145	25.53
1809	466	172	92	52	74	203	226	159	95	77	67	44	14	1	1	1884	27.76
1810	452	169	115	59	73	240	264	163	142	96	68	45	9	2		1897	29.61
1811	451	188	164	77	101	281	290	208	158	95	79	27	11	4		2249	28.25
1812	395	165	92	53	70	159	245	167	114	82	72	34	10			2017	29.21
1813	365	144	130	64	62	107	186	158	120	102	68	51	7	1	1	2223	30.03
1814	390	122	104	53	72	154	239	175	132	106	78	42	18	2		2041	31.67
1815	358	116	97	89	147	254	249	238	155	103	73	48	15	1		1943	32.25
1816	338	168	171	133	81	272	366	265	154	126	68	63	15	5		2225	30.44
1817	438	138	134	73	96	256	325	222	162	106	84	61	11	1		2107	31.50
1818	472	214	118	68	94	370	446	316	187	138	90	67	24	5		2609	32.90
1819	706	334	269	121	130	345	364	262	171	113	96	41	20	6	1	2979	25.80
1820	650	307	241	130	175	443	396	313	202	152	96	61	18	3	2	3189	28.36
1821	633	215	193	102	138	405	396	324	221	154	97	61	21	1		2161	30.22
1822	696	243	193	121	168	424	441	348	264	217	130	67	18	4		3334	31.24
1823	854	401	299	184	232	537	336	462	312	214	137	76	24	3	1	4372	26.67
1824	936	384	364	221	255	409	486	435	309	218	177	67	20	3		4284	28.15
1825	836	250	232	128	140	432	479	373	263	171	122	85	24	4		3539	29.76
1826	844	380	285	134	188	429	452	380	271	209	135	98	32	7	1	3845	29.30
Totals.	11032	4629	3581	2025	2470	6076	6641	5326	3699	2665	1877	1128	329	59	7	53004	29.35

* This column gives the whole amount of deaths, including those where the age of the deceased was not reported.

Art. IX. *Successful Ligature of the Common Iliac Artery.* By Valentine Mott, M. D. Professor of Surgery in Rutgers Medical College, New York.

A DETAILED account of the first operation ever performed upon the *arteria iliaca communis*, for the cure of *aneurism*, and especially of the first attempt to apply the ligature to so great a vessel, without dividing the peritoneum, may prove interesting to the profession generally, and must be immediately serviceable to practitioners of surgery. It is therefore as an act of duty, rather than of choice, that the following statement has been prepared, during such few and brief intervals of leisure, as could be obtained amid the daily engagements and solicitudes of business.

On the 15th of March, 1827, I was requested to visit a patient with Dr. Osborn, (of Westfield, New Jersey, about twenty-five miles distant from New York,) whom we found labouring under a large aneurism of the right external iliac artery.

Israel Crane, aged thirty-three years, by occupation a farmer, of temperate and regular habits, having generally enjoyed excellent health, says about the middle of January he felt some pain about the lower part of the belly, which he attributed to a fall received during the winter. He is in the habit of using great efforts in lifting heavy logs of wood, as his employment at this season consists in carrying wood to market. It, however, was not until a fortnight since, that he perceived any tumour about the lower part of the abdomen. Upon examination, the abdomen on the right side was considerably enlarged from about the crural arch, as high as the umbilicus. When the hand was applied to the parietes of the abdomen, a pulsation was felt and rendered visible to some distance. To the touch the tumour beat violently, and appeared to contain only fluid blood. It commenced a little above Poupart's ligament, and reached, judging by the touch, from without, near the navel—inwards, almost to the linea alba—outwards and backwards filling up all the concavity of the ilium, and reaching beyond the posterior spinous process of that bone.

The rapid increase of this aneurismal tumour occasioned, as the countenance of our patient indicated, the most extreme agony. His sufferings at times were so great that his screams could be heard at a distance from the house. He had been bled several times, taken light food, and was kept constantly under the effect of opium. He was now informed of the serious nature of his case, and that without an operation very little chance of his life remained; with great composure he immediately consented to whatever would give him the best prospect of saving his life.

From the extent and situation of the tumour, he was apprised of the uncertain nature of the operation, as well as the difficulty of performing it, and indeed that it would require an artery to be tied, which never had been before operated upon for aneurism. With these views of his situation, he cheerfully submitted to be placed upon a table of suitable height in a room which was well lighted.

Then, in the presence of Dr. OSBORN, Dr. LIDDLE, and Dr. CROSS, the following operation was performed:—

The pubes and groin of the right side being shaved, an incision was commenced just above the external abdominal ring, and carried in a semicircular direction half an inch above Poupart's ligament, until it terminated a little beyond the anterior spinous process of the ilium, making it in extent about five inches. The integuments and superficial fascia were now divided, which exposed the tendinous part of the external oblique muscle, upon cutting which in the whole course of the incision, the muscular fibres of the internal oblique were exposed; the fibres of which were cautiously raised with the forceps and cut from the upper edge of Poupart's ligament. This exposed the spermatic cord, the cellular covering of which was now raised with the forceps, and divided to an extent sufficient to admit the forefinger of the left hand to pass upon the cord into the internal abdominal ring. The finger serving now as a director, enabled me to divide the internal oblique and transversalis muscles to the extent of the external incision, while it protected the peritoneum. In the division of the last mentioned muscles outwardly, the circumflexa ilii artery was cut through, and it yielded for a few minutes a smart bleeding. This, with a smaller artery upon the surface of the internal oblique muscle, between the rings, and one in the integuments were all that required ligatures.

With the tumour beating furiously underneath, I now attempted to raise the peritoneum from it, which we found difficult and dangerous, as it was adherent to it in every direction. By degrees we separated it with great caution from the aneurismal tumour, which had now bulged up very much into the incision. But we soon found that the external incision did not enable us to arrive to more than half the extent of the tumour upwards. It was therefore extended upwards and backwards about half an inch within the ilium, to the distance of three inches, making a wound in all about eight inches in length.

The separation of the peritoneum was now continued until the fingers arrived at the upper part of the tumour, which was found to terminate at the going off of the internal iliac artery. The common iliac was next examined by passing the fingers upon the promontory of the sacrum, and to the touch appearing to be sound, we determined to place our ligature upon it about half way between the aneurism and the aorta, with a view to allow length of vessel enough on each side of it to be united by the adhesive process.

The great current of blood through the aorta made it necessary to allow as much of the primitive iliac to remain between it and the ligature as possible, and the probable disease of the artery higher than the aneurism, required that it should not be too low down. The depth of this wound, the size of the aneurism, and the pressure of the intestines downwards by the efforts to bear pain, made it almost impossible to see the vessel we wished to tie. By the aid of curved spatulas, such as I used in my operation upon the *innominata*, together with a thin, smooth piece of board, about three inches wide, prepared at the time, we succeeded in keeping up the peritoneal mass, and getting a distinct view of the arteria iliaca communis, on the side of the sacro vertebral promontory. This required great effort on our part, and could only be continued for a few seconds. The difficulty was greatly augmented by the elevation of the aneurismal tumour, and the interception it gave to the admission of light.

When we elevated the pelvis, the tumour obstructed our sight; when we depressed it, the crowding down of the intestines presented another difficulty. In this part of the operation I was greatly assisted by Dr. Osborn and my enterprising pupil, ADRIAN A. KISSAM.

Introducing my right hand now behind the peritoneum, the artery was denuded with the nail of the forefinger, and the needle conveying the ligature was introduced from within outwards, guided by the forefinger of the left hand in order to avoid injuring the vein. The ligature was very readily passed underneath the artery, but considerable difficulty was experienced in hooking the eye of the needle, from the great depth of the wound and the impossibility of seeing it. The distance of the artery from the wound was the whole length of my aneurismal needle.

After drawing the ligature under the artery, we succeeded by the aid of our spatulas and board in getting a fair view of it, and were satisfied that it was fairly under the primitive iliac, a little below the bifurcation of the aorta. It was now tied—the knots were readily conveyed up to the artery by the forefingers—all pulsation in the tumour instantly ceased. The ligature upon the artery was very little below a point opposite the umbilicus.

The wound was now dressed with five interrupted sutures, passing them not only through the integuments, but the fibres of the cut muscles, so as to bring their divided edges together at all parts of the incision, which was muscular. Adhesive plaster to assist the stitches, lint and straps to retain it, completed the dressing. The operation lasted rather less than one hour.*

He was removed from the table, and put into bed upon his back, with the knee a little elevated upon pillows to relax the limb as much as possible, and to avoid pressure upon it. It was considerably cooler than the opposite leg, and flannels were applied all over it, and a bottle of warm water to the foot. From the habit he had been in of taking largely of anodynes, a tea-spoonful of the tinct. opii. was administered, with directions to repeat it in an hour if the pain should be severe.

In less than one hour from the operation, considerable reaction of the heart and arteries took place; he felt, as he stated, altogether relieved from the excruciating agony he had suffered since the aneurism commenced. The whole limb had now recovered its natural temperature.

March 16*th.* The day after the operation, pulse eighty, skin moist —limb warm as the other—complains of some pain at the ligature— ordered a purgative of neutral salts.

17*th.* Pulse eighty, and fuller than yesterday—took ℥x. of blood from his arm—skin moist—tongue brown—considerable uneasiness in the limb—no pain at the ligature—leg of natural heat—salts had a good effect.

18*th.* Pulse seventy-five—skin moist—tongue white—pain in the limb considerable—no pain at the ligature or in the wound—limb warm.

19*th.* Bled him to-day to ten ounces, the pulse being tense and beating eighty strokes in a minute—repeated the cathartic—suppuration appearing to have taken place, the dressings were removed.

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* Dr. Gibson, then professor of surgery in Baltimore, was near the spot during the riots in that city, when a man was wounded by a musket ball, "which entered the left side of the abdomen, passed through the intestines, opened the iliaca communis artery, and lodged in the sacrum." The doctor states, "thrusting into it, (the wound,) the forefinger of my left hand, I discovered that a very large artery had been torn across, and was pouring out blood in considerable quantity." The man died in a few days. "Upon inspecting the vessels of the abdomen," says the doctor, "I found that I had placed two ligatures upon the common iliac artery of the left side, one about half an inch below the bifurcation of the aorta, and the other immediately above the division of the artery into the external and internal iliacs." See Medical Recorder, Vol. 3, p. 185.

20*th.* Pulse seventy and soft—skin moist—wound looks well—pain in the limb continues—leg warm as the other—cathartic operated well.

21*st.* Pulse seventy and soft—wound looks well—repeated the laxative—pain in the leg rather less—continues warm. There has been at no time tension of the abdomen or any particular uneasiness in that part. The patient thus far has been altogether more comfortable than could have been imagined. He takes more or less opium daily, from the long habit he has been in of taking anodynes.

26*th.* No unpleasant symptom—wound looks well—bled again to ℥xij. as there was a little tumefaction and inflammation about the wound.

30*th.* Our patient continues to do well—wound dressed daily.

April 3*d.* Not being able to leave the city, I requested Dr. PROUDFOOT, my late pupil, and a most promising young surgeon, to visit the patient. He reports that he was free of fever—wound all healed but where the large ligature was passing. The ligature appearing to be detached, the doctor took hold of it and removed it: this was on the eighteenth day from the time of its application. Limb of the natural temperature—enjoined upon him to keep very quiet and in bed.

8*th.* There are no disagreeable appearances whatever—he appears to be doing remarkably well—has been bled once since the last report—takes a purgative every other day, and an opiate every night—pulse as in health—no pain—says he is entirely comfortable—wound is dressed with dry lint.

16*th.* Has improved rapidly since the last report. Two days after the ligature came away he very imprudently got out of bed without experiencing any difficulty, except weakness. Rode out to-day—wound perfectly healed.

26*th.* He has been using crutches for a few days to favour the lame leg, which, as yet, feels rather weak. General health greatly improved.

30*th.* Is perfectly restored in health—has a little stoop in his walk, which he says is occasioned by the external cicatrix. Leg is not yet of its full size, nor quite so strong as the other. From the period of the operation, to the recovery of our patient, he did not appear to suffer more pain, or have more unpleasant symptoms, than would ordinarily take place in a flesh wound of equal extent. Much of this, in my opinion, is to be attributed to the prompt and judicious antiphlogistic treatment pursued by Dr. Osborn, to whom I am indebted for the daily reports of the case.

May 29*th*. My patient visited me to day, having come twenty-five miles; he was so much improved in health that I did not recognize him. Examined the cicatrix and found it perfectly sound—could not discover any remains of aneurismal tumour—felt the epigastric artery much enlarged and beating strongly, and a feeble, though distinct pulsation in the femoral artery immediately below the crural arch. The leg has its natural temperature and feeling, and he says it is as strong as the other.

Much credit is due the patient for his firmness on the occasion; although apprised of the great danger attending so formidable an experiment, and the uncertainty of its result; yet with a fortitude unshaken, and a full conviction that it was the only chance of prolonging his life, he cheerfully and resolutely submitted to the operation.

The gratification his visit afforded me is not to be imagined, save by those who have been placed under similar circumstances. The perfect success of so important and novel an operation, with the entire restoration of the patient's health, was a rich reward for the anxiety I experienced in the case, and in a measure compensated for the unexpected failure of my operation on the *arteria innominata*.

New York, 25 *Park Place*, *October* 15*th*, 1827.

ART. X. *Notices of some Anomalous Cases of Dropsy.* By N. CHAPMAN, M. D.

IT is a common remark of writers, that in the commencement, as well as throughout the subsequent stages of dropsy, particularly ascites, there is sometimes almost as much distress from flatulence, as by the accumulation of the fluid. For this and several other reasons, I once thought it not unlikely, that occasionally the blood-vessels may, instead of a serous effusion, secrete a gas, which by some process not understood, might be converted into a fluid state. That the blood-vessels are capable, and do exercise such an office, has been shown by Mr. HUNTER, and is rendered probable by a variety of facts. Dropsy, I have seen in several instances to follow flatulent colic—and I had, some years ago, under my care, in consultation with the late Dr. WISTAR, the case of a boy, which strongly supports the hypothesis.

Having become heated and fatigued by skating, he laid on the ice, and after a time, was seized with colic, attended by a distention of the abdomen, amounting to tympanites. By carminatives, opiates, and external warmth, he was speedily relieved of pain, but on our next visit, a few hours afterwards, we were astonished to find that he laboured under ascites, with œdema of the lower extremities, which proved exceedingly tedious, though he finally recovered.

During the summer of 1825, I had under my care a lady from the country, who, after eating watermelon and some other fruit, was attacked, according to her report, with violent colic, followed immediately by tympanitic distention. On examination I found she had confirmed ascites with œdematous swellings of her feet and ankles, from which she was relieved by copious diuresis and watery discharges from the bowels.

It seems, moreover, that dropsy may be induced by repelled perspiration, or in other words, by an inverted action of the exhalents. Cases to this purport have also come under my notice. Not many years ago, I attended a gentleman, with Dr. Physick, who, returning from a tiresome and dusty ride, went into a warm bath. The water was so uncomfortably hot, that he could scarcely bear it. He, however, continued in it for half an hour, and on coming out felt chilly and soon experienced the distention of ascites, and finally died of universal dropsy.

Nearly about the same time I was called to another gentleman, in consultation with Dr. Physick also, with general dropsy, who traced its commencement directly to his having imprudently plunged into a cold bath, whilst heated and sweating from exercise. Each of these individuals was in the meridian of life, of robust constitution, and previously in the enjoyment of perfect health.

These are anomalous cases, apparently exceptions to the doctrine of the universal and inseparable connection of dropsy with inflammation. But, perhaps, they may be reconciled to it. In the instances, for example, which were preceded by colic and tympanitic distention, it is not altogether unreasonable to suppose that the irritation was extended to the peritoneum, exciting phlogosis—and in relation to the others, succeeding to the use of the hot and cold bath, it is more manifest that there was a metastasis of the irritative impression made on the dermoid, to the serous tissue, and the effusion resulted accordingly. The external and internal exhalents act pretty much reversely, whatever is gained by the one is lost by the other, and very often there is an entire vicarious assumption of office respectively. The functions of the skin being suspended, what is more usual than to see some inward surface or organ increasing its efforts to compensate the loss. Generally, we have under these circumstances, watery diarrhœa, or an augmented urinary discharge. But imagine, that instead of the bowels or the kidneys being thus affected, the peritoneum were excited, should we not be presented with hydropic results?

The doctrine, as now received, presumes that ascites is invariably the effect of pre-existing peritonitis, and especially of the sub-acute or chronic state of it, all the remote causes of the disease uniting to produce such an effect. Cases, however, of ascites, do sometimes follow the acute species of peritonitis, though always I believe, when it is originally weak, or much reduced and delicately diffused. The extravasation of coagulable lymph, or the secretion of pus is uniformly the product of it under opposite circumstances. But having so recently presented my views of the pathology of dropsy, I shall not here resume the subject.*

Art. XI. *Note of an interesting fact connected with the Physiology of Vision.* By John D. Godman, M. D.

THE inverted images formed upon the retina in consequence of the passage of the rays of light through the apparatus constituting the anterior part of the eye, is well known not to lead to any inaccuracy of judgment as to the position of objects, in case the other senses are in their natural conditions. The following instance communicated to me by Reubens Peale, Esq. the uncle of the young man, is the only one with which we are at present acquainted, where the inversion of objects upon the retina was productive of inaccuracy of judgment as to position, notwithstanding all the other senses were in their ordinary condition, and the individual had arrived at the age of seven years.

When his father, who was a distinguished artist, began to give him lessons in drawing, he was very much surprised to find that whatever object he attempted to delineate, he uniformly inverted. If ordered to make a drawing of a candle and candlestick set before him, he invariably drew it with the base represented in the air, and the flame downwards. If it was a chair or table he was set to copy, the same result was the consequence; the feet were represented in the air, and the upper part of the object, whatever it might be was turned to the ground. His father, perplexed at what he considered the perverseness of the boy, threatened, and even did punish him for his supposed folly. When questioned on the subject, the youth stated that he drew the objects exactly as he saw them, and as his drawings were in other respects quite accurate, there was no reason to doubt his statement. Whenever an object was inverted previous to his drawing it, the drawing was made to represent it in its proper position, showing that the sensations he received from the eye, were exactly correspondent with the inverted pictures formed upon the retina. This condition of his vision was observed to continue for more than a year, when his case gradually ceased to attract attention, which was when he was about eight years old. Since that time he has imperceptibly acquired the habit of seeing things in their actual positions.

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* Vide Philadelphia Journal of the Medical and Physical Sciences, Vol. IV. N. Series, No. 8. p. 298.

[The above case is highly curious and interesting. Professor CHAPMAN has met with one somewhat similar. A distinguished lawyer of this city for some time saw all objects inverted; thus the houses seemed to stand on their roofs, people on their heads, &c. This defect in vision was occasioned by disorder of the stomach, and ceased on that organ being restored to a healthy condition.

Several cases of anomaly of vision, of great interest as connected with the physiology of that function are on record, some of which it may be interesting to notice. Dr. WOLLASTON, in consequence of violent exercise, suddenly found that he could see but half the face of a man whom he met, and it was the same with every object he looked at. Thus, in attempting to read the name Johnson over a door, he only saw —— son, the commencement of the word being invisible. On this occasion the loss of sight was towards the left—it was of short duration. Several years afterwards he had a recurrence of the affection, but on this occasion the blindness was the reverse of the former, being to the right. It continued twenty minutes, and was suddenly removed by the excitement of agreeable news. Dr. W. has met with other instances of half blindness.*

Dr. CRAWFORD relates the case of a female who was attacked with a slight hemiplegia of the left side. The patient regained the use of her limbs, but from the time of her seizure till her death, which happened about five years afterwards, when she looked at an object, she could only see the one-half of it, that was towards the right hand, distinctly, the other being very obscure. This was equally the case whether she looked with both eyes or only with the right one; but when she looked with the left only the obscurity was greater. When four fingers were held before her, she could see two of them distinctly, the third she could distinguish, but could not see plainly, and the fourth she could not see at all. When she looked at three fingers she could see two of them pretty plainly—the first, however plainer than the second—the third she could not distinguish at all. When she looked at two fingers she could see only one distinctly.

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* Reasoning on these facts, Dr. Wollaston is led to conclude that decussation takes place between the adjacent portions of the optic nerves. Thus, that the portion of nerve that proceeds from the right thalamus to the right side of the right eye, passes to its destination without interference, and in a similar manner the left thalamus will supply the left side of the left eye with a corresponding portion; while the remaining portions of both nerves pass over each other, to the eye of the opposite side, intersecting each other, either with or without intermixture of fibres. This opinion is strengthened by the observations of Treverinus on the Simia aygula, and the observations of D'Azyr and the Wenzels on the optic nerves in man.

After she had recovered so as to be able to get out of bed, it was discovered that, although she could see only half of an object plainly, when held directly before her, yet if it was moved towards her right hand, and she continued to look straight forward, she could see the whole of it distinctly. On the contrary, if it was moved toward her left hand, keeping her eyes fixed as before, she could not perceive any part of the object. It should be remarked that it was the left side of the body that was hemiplegic, yet it was the right half of each retina which was insensible.

The writer of this note has been twice affected with a species of half blindness, somewhat different, however, from any he has seen recorded. About twelve or fourteen years ago he was struck with the circumstance of his only seeing a portion of the objects at which he looked, and in order to satisfy himself respecting the state of his vision, he took a book and attempted to read. The lines appeared distorted, thus in looking at a word containing several letters, the first few were seen in their natural position, the remainder were invisible, but upon looking more attentively they were seen just above their natural position, as if occupying the line above, this line not being visible; on moving the eye along, these displaced letters became visible in their natural position, but the next word was seen in the situation of the line above, and so on. It was only when a strong effort to read was made that this distorted appearance was made out, when looking at the page, generally, a portion of it was seen tolerably distinctly, the remainder had a most confused appearance. The second attack was similar to the first—it occurred at an interval of two or three years. In both instances the affection was produced by gastric derangement, attended with considerable head-ache, it went off entirely when the cause was removed—neither continued longer than a few hours.

There is a respectable inhabitant of this city, who for years has had a derangement in the vision of his right eye, all objects that make a strong impression on the retina, as a lamp at night, appearing multiplied sometimes to the extent of seven or eight. I. H.]

REVIEW.

Art. XII. *An Act for establishing a Health Office, and to secure the City and Port of Philadelphia from the introduction of Pestilential and Contagious Diseases, and for other purposes, passed January 29th,* 1818, *with its supplements of the years* 1821, 1824, 1826, 1827.

An Act to provide against Infectious and Pestilential Diseases, passed March 21st, 1823. *New York.*

An Ordinance to preserve the Health of the City of Baltimore, and for the due performance of Quarantine at the Port of Baltimore, 24th March, 1826.

City of Boston. An Ordinance Establishing and Regulating the Quarantine of Vessels, &c. Dec. 25, 1826.

THE imperfection and uncertainty in the science of medicine, have been a fertile source of complaint among the enemies of the profession, who have derided its theories and depreciated its doctrines, without comprehending the difficulties attendant upon its acquisition, or the extent of talent and observation necessary for its acquisition. Unfortunately we cannot deny that there is but too much truth in some of the allegations. In reviewing the annals of our art, it is mortifying to our pride to perceive that whilst other sciences have steadily advanced in usefulness, ours, certainly one of the most important and indispensable to human happiness, has remained a fearful distance in the rear.

There is no point connected with medicine that more strongly exemplifies the striking diversities of opinion among us, than that of contagion and the importation of pestilential diseases—no subject connected with our art has created more diligent inquiry, or more bitter controversy; volumes have been written on the subject, and as is too often the case in disputes, with little more effect than to confirm the authors in their preconceived opinions. That this point should have so generally attracted the attention of physicians in all ages, is not to be wondered at, as there is no question relating to medicine of deeper or more vital importance, not only as involving the commercial welfare and prosperity of our maritime cities, but also as intimately connected with the general safety of their inhabitants.

This question involves the patriotic feelings of physicians in every country, hence some are to be found who deny the possibility of the disease having originated with them; asserting that in every case it has been derived from abroad, and endeavouring to persuade themselves and the public, that the proofs of its foreign origin can always be readily traced to some vessel with the disease on board, that has arrived from a foreign port; whose inhabitants, on the contrary, are as firmly convinced that they have derived it elsewhere. This has been strongly exemplified in the United States in 1819, when in most of our seaports there was exercised a rigid system of quarantine as regards each other, whilst at the very time the yellow fever prevailed to a greater or less extent in them all; thus proving most incontestably either that the present quarantine laws are absurd, and that commerce is uselessly burthened with heavy expenses and vexatious delays—that the fears induced by the belief in importation and contagion are not only dangerous to the community, but destructive of the best feelings of humanity—and that the disease is wholly domestic in its origin, and depends on local circumstances for its appearance and prevalence; or, that if the doctrine of contagion be founded on fact, that the laws now existing are deficient in their operation, and require a total revision; for, should such be the case, quarantine restraints cannot be too rigidly enforced, at whatever may be the individual loss or suffering.

But, from facts too well authenticated to be denied and too irrefragable to be refuted, a change is certainly taking place in the sentiments of medical men on this subject. The study of epidemic diseases on philosophical principles is of comparatively late occurrence: formerly, physicians were content with noting their progress and detailing their symptoms, without attempting to explain their laws or trace their origin; but a better state of things exists at present, and in consequence of the unwearied exertions and philanthropic researches of many of our brethren, much light has been thrown on this intricate subject, and we have a right to look forward with confidence to an era when the mists of prejudice and error which now envelop it will be entirely dispersed.

It has been unfortunate for the advancement of our art, that we are constantly called upon to combat opinions and errors which have originated from the profession itself; there is scarcely a theory, however absurd, or an opinion, however false, relating to medical subjects, which have not once been considered as truth; these in progress of time have been discarded by physicians, but still remain as dogmas among the generality of mankind. The multitude are more apt to adopt than to form an opinion; and it is a just observation of a late writer. "that it is easier to think from other people than from one's own mind; the opinions of men are like their dress; they are made by another person, but once adopted and worn, become property;" but error thus engrafted on mankind, becomes every day more fixed, and as it is transmitted from age to age, acquires greater strength, and at last entwines its roots so firmly and pertinaciously with all our opinions and sentiments, that it becomes almost impossible wholly to eradicate it.

England and the United States are, we believe, the only nations of Christendom in which a code of laws for the preservation of the public health, does not form a material part of the jurisprudence of the country; we have, it is true, in all our maritime towns, quarantine regulations to guard against the introduction of pestilential and contagious diseases from abroad, these laws also include a few provisos for the removal of any sources of infection that may exist independently of those arising from shipping, but here they end, both countries are alike destitute of a general medical police, which of all laws is the most onerous and unpleasant, and fortunately from the habits and character of the people, it would be wholly unnecessary.

All our quarantine regulations are founded on the assumption that epidemic diseases are dependent on a specific contagion, and hence are intended to prevent the importation of a virus, but it must be admitted by the most strenuous adherent of the doctrine, that they are extremely deficient in their operation, and are not capable of fulfilling the intentions for which they were instituted; as a proof of this, we need but advert to the fact, that although we have had quarantine laws in Philadelphia since 1700, yet the yellow fever has made its appearance in 1746, 1747, 1748, 1751, 1762, 1793, 1797, 1798, 1799, 1802, 1803, 1805, 1818, 1819, 1820, 1825: in fact, as is observed by MACLEAN, "upon every principle then, whether of the utility or perniciousness of sanitary laws, the subject remains in a most unsatisfactory state."

We are by no means advocates, in the present unsettled state of our knowledge on the subject of contagion and of epidemic diseases, for the abolition of quarantine laws; indeed, should it be proved most incontestably that we have never derived the yellow fever from abroad; still a due observance of certain precautionary measures at quarantine stations towards all vessels arriving during the summer months from tropical climates should always be adopted and strictly attended to, for although the disease may not be contagious and never imported into our towns in a developed form, still there can be but little doubt but that many of our pestilences have been satisfactorily traced to shipping, and in some instances where the vessel had arrived from a port in which the fever did not prevail at the period of her departure, and whose crew were all landed in a healthy condition. By the mode pursued at present with some variations in all our seaport towns, the only real way in which importation can take place is in a great measure overlooked; in the city no vessel is detained at quarantine or cleansed, unless she arrives from a port at which sickness prevails, thus acting exclusively on the idea that the fomites must exist in a concentrated form before any danger is to be apprehended, and thus leaving many abundant and prolific sources of disease wholly unnoticed, for as we have before observed, we have instances where the fever has originated from shipping in cases where they had arrived from a healthy port, and without having had any sickness on board.

Dr. Maclean, who has lately published a work on the "Evils of Quarantine Laws, and the Non-existence of Pestilential Contagion," has gone much further than our knowledge respecting contagion will warrant. The ground work on which he has erected his speculations is perfectly good, yet his deductions are, in many instances at least, assumed. When he attempts to prove that the belief in the doctrine of contagion is untenable and fraught with danger, we cannot deny the validity of his arguments, but when he insists on the total abolition of all sanitary laws, his arguments although exceedingly ingenious, must fall to the ground, as they are but based on an unsubstantiated hypothesis; nevertheless, we are much indebted to him for his researches, as it has induced a series of investigations on this most important question from which valuable results may be expected.

But we shall leave this part of the subject for the present, and proceed to an analysis and history of our health laws as far as we have been able to obtain them. We are conscious that there are many deficiencies in our quotations from the laws of other cities, but the only documents to which we have had access, have been their respective city ordinances and printed health laws.

The first enactment of a law for the protection of Philadelphia from contagious diseases, appears to have been passed 12th William 3d, 1700; it provided that no unhealthy vessel coming from an unhealthy or sickly port, should come nearer than one mile to any port within this jurisdiction, without a bill of health, or land any person without permission, under a penalty of one hundred pounds. This law remained in force until 16th George 2d, 1742, when an act was passed, authorizing the purchase of Province Island, and the erection of a lazaretto thereon, and vesting the same in trustees. In 1774, the colonial assembly passed an act, which embraced several new regulations, which were in 1803 annulled, and the legislature created a Board of Health under that title, with a code of laws for their government, by which the governor was directed to appoint five persons to act as members of the board, with a salary of five hundred dollars each, viz: three from the City, one from the Northern Liberties, and one from Southwark, not more than two of whom were to be physicians. Some objections having been made to this part of the law, the legislature again took up the subject in 1818, and altered the law in several of its features, the principal of which was, that the Board was thereafter to consist of eleven members, six of whom were to be appointed by the councils of the city, two by the commissioners of the Northern Liberties, one by the commissioners of Penn Township, one by the commissioners of Southwark, and one by the commissioners of Moyamensing; since which time Kensington having been incorporated, also elects a representative, so that at present the Board consists of twelve members.

In Baltimore the health law of 1826, provides for the appointment of three commissioners of health, who, with a consulting physician, form the board. The health law of New York does not specify the number of members of the Board; it is to consist of such persons as the mayor and councils of New York shall appoint. The Charleston board is composed of thirteen commissioners chosen by the city council; in Boston the corporation of the city appear to act as a Board of Health.

The powers granted to the boards are necessarily very great, although in some instances they fall short, and hence are inadequate to produce the good effects that were intended.

Those granted to the Philadelphia board, are

> "The said board shall have, and hereby is vested with full power and authority to make general rules, orders, and regulations, for the government of the lazaretto, and the vessels, cargoes, and persons there detained under quarantine, and of the Health Office and public hospitals, and for the mode of visiting and examining vessels, persons, goods, and houses, and shall also have power to appoint such officers and servants as may be necessary at the Health Office, Lazaretto, and the City Hospital."

The lazaretto is also vested in them with full power to erect such buildings, and make such enclosures as to them may seem fit; also, whenever they shall receive information that any malignant or contagious disease prevails in any port or place in the United States, they may prohibit all communication with such place, except under such regulations as they shall direct, and remove any person coming from such a place, to a spot by them directed, to remain there for a time not exceeding twenty days; also to remand all vessels coming up to the city, if thought dangerous to the health of the community; they may also order off all vessels from any part of the city when said spot shall be infected with a contagious disease, and when a malignant disease appears in the city, to take such steps for preventing the spreading of the contagion by forbidding all communication with the sick, and other means as shall be most conducive to the public good—patients removed are to be taken to the city hospital—to defray their expenses in cases of malignant fever, they are authorized to levy a tax of fifteen thousand dollars with the consent of the mayor, two aldermen, and two justices of the peace. The board have also the power to order the removal of all nuisances at the expense of the owners of the property on which the nuisance may exist.

The powers granted in the New York board appear to be all specific, and do not embrace as wide a scope as those bestowed on that of Philadelphia; for although they have the charge of the quarantine establishment with power to make certain regulations, yet in cases of a malignant disease existing at other ports, the proclamation forbidding intercourse with such place must come from the governor of the state, the mayor of New York, or the recorder.

The board can send vessels down to the quarantine ground, if they should be thought prejudicial to the health of the inhabitants, and continue the detention as long as they shall deem necessary. As is the case in Philadelphia, the marine hospital at the quarantine ground is vested in them. They also have the right on the appearance of a contagious disease, to prevent all communication with the sick; they can also appoint health wardens, whose duty shall be to visit and examine houses, &c. and if found in a filthy condition, to cause them to be cleansed; the board also have power to fence up any street, &c. when from the prevalence of a contagious disease they shall deem it expedient; all nuisances are to be removed by a process of common law.

In Baltimore the duties of the board are more extended in many particulars than in either of the last mentioned cities, as they also act in the capacity of city commissioners, and have the superintendance of the cleansing of the streets, &c. With respect to removal of persons in cases of contagious disease, they have very great powers, as they can order any one to be removed under a penalty of twenty dollars for every twenty-four hours such person shall remain after the order shall have been served; they can also fence in all districts in which a malignant fever appears, they have also a power which should be given to all the Boards of Health, namely, that of causing any wharf or dock which they may deem prejudicial to the health of the city to be either repaired or cleansed out; whilst alluding to the subject of wharves, we would also mention that no wharves in Baltimore can be erected or repaired except in stone; this regulation is of extreme importance, and should be adopted in all our towns.

In Charleston much the same powers are granted.

Not having access to the health laws of Boston, we are unable to say more than that the powers appear to be vested in the mayor and corporation of the city, who regulate the quarantine of vessels, and other matters connected with the general health of the city.

They appoint in June, annually, five physicians, to whom, on any alarm of small-pox, or other contagious disease, the mayor is to apply for advice; the mayor and aldermen also have power to remove, or cause to be removed from any part of the city any person labouring under a contagious disease, provided a majority of the physicians shall deem it necessary; they also order any houses to be vacated for such time as the physicians shall think expedient, and the safety of the inhabitants may require.

It is evident from the above condensed view of the general duties of the different boards, that they are endowed with a despotic power in some instances, and are deprived of it in others, where, if it should ever be granted to corporate bodies in a republican government, it would be most conducive to the public good. What we particularly allude to, is removal of persons affected with contagious and malignant diseases, either to a hospital, or to some place where the disease would not be likely to prove injurious to the community at large. In the case of small-pox this would be highly important, and would give a Board of Health an almost complete control over the disease. As the law at present stands, both in Philadelphia and New York, no one can be removed without their consent being obtained; the boards, it is true, have the power of prohibiting all intercourse with the diseased, but there are so many circumstances which must necessarily contravene the full enforcement of such a regulation, that it must generally prove ineffectual. Baltimore and Boston have given such power to their boards, as we have before observed, under certain penalties; this power, which certainly does not militate against the rights of our citizens, might be advantageously granted by the legislatures of the different states to the boards under their control.

We will now proceed to the subject of quarantine as ordered in the different cities we have noticed; this we conceive to be the most defective part of our health regulations, as being onerous and oppressive to the mercantile interest, and not fulfilling the intent for which the laws have been established. There is no inquiry of more importance than that of the measures to be adopted to guard against the introduction of contagious and malignant diseases: experience has shown, that the mode now adopted in all our seaports, being directed wholly against a specific virus, cannot be effectual in preventing the introduction or origin of yellow fever, as it may arise not only from foreign but domestic sources, and in both instances appears as a partial or a general epidemic not dependant on contagion properly speaking, either in its origin or subsequent progress. It may be asked, if the disease is not contagious, how then can it be traced to shipping, or how can vessels arriving from certain climates be considered as causing the disease? This question may be readily answered; from the accumulation of foul and contaminated air contained in their holds, arising either from a putrefaction of part of their carges, or the filthy condition of their lining and timbers, to both which circumstances vessels from tropical climates are extremely liable from the nature of their cargo, consisting for the most part of vegetable matters, as sugar, coffee, cocoa, &c., and the heat to which they are necessarily exposed; should they be in a leaky condition, and thus damage part of their loading, putrefaction and its consequences, the evolution and extrication of great quantities of deleterious and offensive gases, must inevitably ensue, which being confined and concentrated from the closed state of the hold, may not affect the crew during the voyage, but on their arrival and subsequent opening of the hatches, are poured out in streams, and constitute a prolific source of disease; this appears to have been the case with the ship Deborah, to which the origin of the yellow fever in 1793, was distinctly traced, and in the Ten Brothers at Boston, which caused the fever of 1819, in that place. The fever of 1799, in Philadelphia, was also proved to have originated in the first instance from the sloop Mary, but under somewhat different circumstances, although still from the same causes; in this case the vessel landed her cargo perfectly sound, nor were any of her crew sick during the voyage, when however the cargo was discharged, she was washed out and her hatches closed, but there still remained a quantity of coffee in her hold, which exposed as she was at the wharf to a high temperature for about three weeks, ran into putrefaction, and evolved an immense quantity of noxious vapour; this became so offensive that she was ordered to be ventilated and cleansed, the consequence of the escape and dispersion of this exhalation was, that many persons in the neighbourhood were seized with symptoms of yellow fever. In this case there is most unequivocal testimony that the disease does not require a specific virus for its origin, and that it may arise from causes wholly unconnected with contagion, and which strict regulations properly enforced would always remove. But even under such circumstances, it appears to require a certain state of the atmosphere before the fever can be generated, as there is scarcely a year in which the above mentioned sources do not exist, yet all are not marked by the visitation of pestilence. From a paper given in the Eclectic Repertory, derived from Poulson's Daily Advertiser, it is shown that the yellow fever has never prevailed to any extent in Philadelphia, unless the mean heat of the thermometer at 3 P. M. during the summer, and especially during the months of June and July should be as high as seventy-nine degrees; there may be it is true a few sporadic cases, but the disease did not spread. Another state of things may also prevail which may give rise to it; from domestic sources there may be a predisposition to the disease, in the inhabitants of a port which only requires some exciting cause to develope, this may be furnished by a vessel arriving from a tropical climate, the state of whose cargo or condition of whose hold, although not sufficient in themselves in a healthy and uncontaminated atmosphere to cause disease, yet when combined with sources of disease on shore, may thus like a spark to a train of powder, induce the immediate development of pestilence. From what we have said it must be evident that we consider that the great object to be enforced in quarantine regulations, is to prevent the introduction of noxious matters from vessels or their cargoes; therefore no vessel coming from a warm climate, or having cargo on board which from its nature being liable to putrefaction, should be permitted to approach the city until she had been thoroughly cleansed and purified, and any part of her cargo that was damaged, detained until the approach of cold weather precluded all fear of its proving a source of disease. As will be seen, the quarantine regulations respecting passengers are extremely strict and calculated to oppress many who are little able to bear the additional expense the detention they experience necessarily entails on them. If facts and reasoning are to be relied upon as regards the contagion of yellow fever, there cannot be a shadow of reason for detaining them at a quarantine establishment; should they even be so unfortunate as to be attacked by disease, there is but little danger of their communicating it to others; we can even conceive that in some instances passengers taken ill of yellow fever after their arrival from a warm climate, in our city, during the summer season, may have been attacked by the disease even while none of the inhabitants were affected, from their not having been accustomed to those sources of disease, to which those residing on the spot for some time are wholly innoxious from habit; that this takes place in southern ports, is too notorious to need a comment; every stranger arriving at New Orleans is considered as obnoxious to the attacks of yellow fever till he has been acclimated, or passed one summer there; even this in many cases is not sufficient to accustom his constitution to certain agents which appear to have little or no effect on the natives of the place.

The health law of Philadelphia, after specifying the fees to be demanded from vessels arriving at the port, and the duties of the officers of the Board, goes on to state those cases in which vessels are to be detained. "If it shall appear upon examination, that the ship or vessel came from a port or place at which a malignant or contagious disease prevailed, such vessel shall be detained at the Lazaretto for such time as the Board of Health may deem necessary, not exceeding twenty days. And the Board of Health shall determine and direct what measures shall be pursued to cleanse the vessel and cargo, purify the clothing and baggage, and restore the health of diseased persons on board." Certain goods, however, are permitted to be brought to the city in lighters, such as wine, sugar, rum, &c. At the expiration of the twenty days, if none of the crew or passengers have been attacked with a malignant or contagious disorder, the Board may allow the vessel to proceed to the city, but in cases where sickness has prevailed to a limited extent, either during the voyage, or since her arrival at quarantine, the vessel shall be detained such further time as the Board shall deem necessary; this in general has been twenty days from the sickness or death of the last person attacked; when, however, there has been much sickness on board, the vessel is to be discharged, and the cargo, except such articles as have been specified, shall be stored, the Board may however grant permission for the whole of the lading of a vessel thus detained to be brought to the city in lighters; the vessel in cases where she has been in a filthy and offensive condition, is not permitted to come up to the city during the quarantine season, but must take her outward cargo on board at the Lazaretto.

The vessels which are subject to detention are—1. Those from a foreign port at which sickness may prevail, or those detained under a special order of the Board.—2. Vessels from a port in the United States which have only touched there on the voyage from a foreign port.—3. Vessels from the Mediterranean; in the latter case should any of the crew or passengers have been attacked with the plague during the voyage, the vessel must be unloaded and her cargo cleansed, and no part permitted to enter the city for twenty days.—4. All vessels from infected ports in the United States—by the supplement of 1821, all vessels coming from the southward of Cape Fear, are subject to detention at the Lazaretto, and all vessels having on board vegetables, fish, or hides, are not permitted to discharge their cargo until a permit shall be obtained from the Board of Health, and also that within forty-eight hours after the discharge of every vessel, the captain, owner, or consignee must report the same, and the Board, if they think proper, shall have said vessel cleansed and purified.

From a fear of extending this paper beyond our limits, we have only given a general view of the operation of the quarantine law in this port, avoiding as much as possible entering into the particular rules, regulations and penalties, detailed in the law, under each of the heads we have noticed: it will be perceived that the law is very general, and thus leaves the particular application of it to the Board: in this it differs materially from almost all the sanitary laws of Europe, which are extremely minute in detailing all ports to which the restriction is to extend, thus defeating in a great measure any good which might arise from the restrictive system, for it might often occur, that whilst not one of the interdicted ports was afflicted by disease, vessels would arrive from others on which no restriction was laid, and which, notwithstanding, were devastated by pestilence: thus for instance, in the case of small-pox, which occurs in ports never considered as liable to contagious diseases, and hence are unrestricted, vessels might arrive with the disease on board, and in a short time affect a whole community—that such has been the effect even under the wide scope of our law there can be no doubt; many of the first cases of last spring were distinctly traced to emigrants from Nova Scotia, where it had prevailed to a considerable extent. We will now compare the laws of our cities on this point.

By the New York law, "every vessel arriving from any port, island, or other place, in Asia, Africa, the Mediterranean, America lying south of Georgia, or from any of the West India, Bermuda, or Western islands, and all vessels from foreign ports having on board forty or more persons, and all vessels on board of which any person shall have been sick, or died while at a foreign port, or on the homeward passage," may be quarantined at any time of the year, and if arriving from the West Indies, or from America south of St. Mary's in Georgia and north of the equator, or from any port or place in the continent of Africa, or islands near the same, between the 31st of May and 1st of October, shall be detained at least two days at quarantine, or as much longer as the health officer shall deem necessary, and the vessel ventilated and cleansed, &c. After the officer shall permit her to depart she is not to come within three hundred yards of the city, until she shall have been again inspected by a person appointed for that purpose by the Board of Health. The law also enacts "that every vessel arriving in the port of New York, from any port, island, or place, in the Mediterranean, in Asia, in America south of the equator, or from the Madeira, Canary, Cape de Verd, Western, Bermuda, or Bahama islands, between the 31st of May and 1st of October," shall remain two days at quarantine, and be cleansed and purified, and when released, shall as in the preceding instance, not approach the city within three hundred yards, except specially permitted; all vessels from the southward of Cape Henlopen are also subject to quarantine, or from ports north of that when they have foreign merchandise on board; all vessels coming from a port in which yellow fever existed, or on board of which any person has been sick or died, are to be detained thirty days, and twenty days after the discharge of her cargo, the cargo to be ventilated and cleansed, and then on an examination by the agents of the board may be permitted to be landed. The crew and passengers must also remain twenty days from their arrival, or fifteen after the last sickness or death on board. The restriction on passengers is also extended to all persons from other ports or places in the United States, America, or West Indies, south of St. Mary's in Georgia, who are not to enter the city under twenty days from the time they sailed. Whenever the governor of the state, the mayor of the city, or recorder, shall receive information of the prevalence of a contagious fever at any place, he shall issue a proclamation prohibiting vessels from coming from such place, and also cut off the intercourse by land.

In Baltimore, the quarantine law is more general in its operation than in Philadelphia. It provides "that all vessels arriving from foreign ports or coastwise, between the 1st of May and 1st of November, shall bring to below the city, and there remain until visited by the health officer," who shall either permit her up to the city, or if there has been sickness on board, or other circumstances which he may consider dangerous to the health of the city, shall order her to the Lazaretto, there to be discharged, cleansed, and purified.

The Boston law enacts, "that from and after the 15th of June annually, and until the 15th of September in each year, a quarantine shall be had on all vessels, &c. that come within the harbour of Boston on board of which any person shall have died or been sick of any infectious or contagious disease during the passage to Boston, or which are from, or have brought their present cargo, or part thereof, from any port or place in the West India islands, or from any port or place within the tropics, except from beyond the Cape of Good Hope, or Cape Horn, or from any port or place within the Straits of Gibraltar, or from any port or place wherein infectious or contagious disease doth prevail, or recently hath prevailed." It also provides, that vessels may be quarantined, coming from any place in the United States on board of which any person shall have died or been sick of an infectious or contagious disease. The sole control of all vessels at quarantine, is vested in the resident physician, who is to report daily to the mayor and aldermen.

Such are the quarantine regulations in some of the principal cities of the United States. We have been obliged to condense them as much as possible, in order to be enabled to touch on some other points connected with our sanitary laws. It will, however, be seen, as we have observed on entering on this subject, that they are all founded on the assumption of yellow fever being contagious, or capable of being imported in a developed form; they however differ materially in their severity and operation; that of New York, being the most specific as to the places and objects towards which the quarantine is to be exercised. The Boston and Baltimore laws give a wide scope to the officers acting under them, and if carried into effect in a proper manner, will do every thing that can be expected from quarantine regulations; in fact, to obtain those benefits from restrictions on vessels which is attempted by our different laws, every vessel, and from whatever port, should be visited and examined at a quarantine station, and if found filthy and offensive, she should be detained; but in a clean and healthy condition, there can be no danger to be apprehended in permitting her up to the city, even coming from what are considered as infected ports.

The only points connected with our health laws, we shall now notice, are those regulations to guard against any domestic sources of disease, and the plans adopted to prevent the spreading of an epidemic, when it unfortunately has made its appearance; these are of extreme importance, and merit the utmost attention, as in fact, much more is to be expected from them than can be effected by the present mode of quarantine. The health laws of each of the cities provide for the removal of all nuisances existing within the precincts of their authority which may be considered as injurious to the health of the inhabitants. There is, however, one important source of noxious exhalations which is overlooked in all the health laws to which we have access—we allude to grave-yards within the limits of our cities. This calls most imperiously for the interference of our constituted authorities. In our city many of them are becoming extremely crowded, and require to be closed. We are aware that DIEMERBROECK and BANCROFT have satisfactorily proved that the effluvia arising from the decomposition of animal matters are not capable of generating an epidemic disease, but at the same time there can be but little doubt that it tends to the deterioration of health, and should in all cases be either removed or destroyed by such means as will diminish their evil effects on the human system. Dr. Pascalis, of New York, has given an able and learned exposition of the dangers arising from the practice of interments in large cities, to which the attention of different Boards of Health cannot be too strongly directed. Although we do not agree with the learned author in all his conclusions, yet we feel perfectly convinced of the truth of his general argument, and would rejoice to see an entire prohibition of all places of interment, at least within the populous part of the city. It is true that the expense and difficulty of transporting the dead to a distance are objections, but still in this, as in all other circumstances connected with the public weal, private convenience should give way to general policy.

The last point we shall notice, is that of Vaccination. This, in most of our cities, does not come under the cognizance of the Board of Health, although the care and responsibility of preventing the ravages of the small-pox forms by no means an unimportant part of their duties. In Philadelphia, the Mayor appoints a Vaccine Physician, with four collectors of cases; his duty is to vaccinate gratuitously all persons who are unable to pay for this operation; this mode is also pursued in the districts. In Baltimore, the Board of Health appoints six physicians for this purpose. In the other cities we are ignorant what plan is pursued, but as we find no allusion to it in their respective health laws, we take for granted that, as in Philadelphia, it does not come under the cognizance of the Boards of Health. It must appear evident that this division is hurtful, and in some measure prevents the usefulness intended by the framers of the law. From the laws existing in all our towns, physicians report all cases of small-pox, as well as of contagious fevers, to the different boards; hence these bodies would at once be enabled to take measures to check the disease, by adopting more rigorous and effective modes of extending the benefits of vaccination by appointing additional physicians and collectors of cases. This applies more forcibly to Philadelphia than to any other of our towns, as from the number of corporations composing the government of it, it is almost impossible to act with unanimity and decision on a point which, to be effectual, must be general. This can only be effected by the Board of Health, which is endowed with powers which extend not only over the city, but also over the districts. By placing this duty in their hands, the system would be uniform throughout, and prevent the clashing of interests which, from the present plan must necessarily ensue. It might be objected that it would increase materially the expenses of the Board, which are already great. This, it is evident, must be futile, as if even the Board should be obliged to levy a tax for the purpose, it is one which, as tending to the safety and welfare of the community, would be most cheerfully acquiesced in; added to which, it surely would be perfectly immaterial whether the money is raised for this purpose by the Board of Health or by the constituted authorities of the city and districts. In fact, viewing it in every light, we are convinced that it would be advantageous to delegate the duty of extending the benefits of vaccination to the Board of Health.

Before concluding this brief analysis of our sanitary laws, we will venture to throw out a few suggestions as to what should constitute one which would act with more certainty and effect than any which we have at present in operation in the United States. Each that we have perused contain some salutary provisions which are wanting in the others, and most contain clauses which, to say the least of them, are ineffective in their operation, and only tend to harass commerce without attaining the end for which they were enacted. At the same time, we are doubtful if any laws, however perfect they may appear in theory, will ever prevent the recurrence of the yellow fever in our maritime cities; the sources from which it may arise are so numerous and diversified, and depend so much on circumstances over which we have no control, that it is next to an impossibility to guard against them all, however strict may be the laws, and however vigilant the Boards of Health. But, although we may not be able to prevent its origin, there can be but little doubt but that a stop can be put to its general prevalence; this has been most satisfactorily proved both in this city and in New York. Let it arise from whatever cause, whether from sources existing in the town, or from shipping, it always commences at a point, and gradually extends itself as the atmosphere becomes contaminated, subjecting all who are exposed to its deleterious effects to an attack of the disease; should no check be put to its progress, the circle gradually increases, and finally spreads to such an extent, that all human means are insufficient to stay its increase, except a total abandonment of the infected district; but on its first appearance, should this space be cleared of its inhabitants, and all access to it prohibited, until it had been thoroughly cleansed and purified, and the occurrence of frost had entirely removed all infection, it may be completely commanded and subdued.

The health laws of the United States should be identical and consentaneous in their operation: as these regulations can never emanate from the government of the United States, being by right under the jurisdiction and control of the state sovereignties, the only mode to arrive at this desirable end would be a law framed by delegates from the different states, and enacted by their respective legislatures, whose provisions should be the same as far as the situations of the places would allow.

All vessels from tropical climates, whether from healthy or unhealthy ports, should be obliged to stop at quarantine until they had been cleansed and ventilated, and the state of their cargoes examined; if these are found in an unsound and putrifying state, they should be discharged, and the unsound parts separated and detained, whilst the sound, after having been purified, might be permitted to proceed to the city. After a vessel has been discharged in port, she should undergo a thorough and complete ventilation and purifying under the inspection of an officer appointed for that purpose.

Passengers should be permitted to leave quarantine, unless when labouring under disease.

The boards should be endowed with full powers, on the appearance of a contagious or malignant disease, to remove all those attacked, and if necessary, to vacate and prohibit all intercourse with that part of the town.

They should have the power to cause to be removed all nuisances, which might tend to the deterioration of the health of the city, and in such cases should have a lien on the property for any expenses they might incur; they should have the right to prohibit interments in the populous parts of the city, especially during the summer months. The law should also prevent the erection or repair of any wharf or dock, except with stone; the wharves should also be paved and regularly cleansed, and the docks should be of such a depth as never to be uncovered during low tides.

It will be perceived that we have proposed in the above, that the boards should be endowed with almost unlimited powers. A health law to be effectual must be arbitrary, and admit of no dispute. If such enactments are to do any good, they must be rigorous, as half-way measures only tend to oppress, without effecting the proposed beneficial ends. But a great deal depends upon the confidence with which the public may repose in these institutions. The office of guardians of the public health, necessarily entails on its holders many unpleasant and onerous duties; these are often aggravated by the attempts which are made to cast an odium on their proceedings, and to thwart them in the discharge of the trust reposed in them—at the same time it is also the duty of the different boards to have no concealments from their fellow citizens, but to act with openness and candour. By such a line of conduct they will always secure to themselves the thanks of the humane and unprejudiced. R. E. G.

BIBLIOGRAPHICAL NOTICES.

1. *Lectures on the Operative Surgery of the Eye; or, an Historical and Critical Inquiry into the Methods recommended for the cure of Cataract, for the Formation of an Artificial Pupil, &c. &c. &c. containing a new method of Operating for Cataract by extraction, which obviates all the difficulties and dangers hitherto attendant upon that operation: being the substance of that part of the author's Course of Lectures on the Principles and Practice of Surgery, which relates to the operations on that organ.* By G. I. Guthrie, Esq. Second edition, with seven Explanatory Plates. London, 1827, pp. 554.

A complete treatise on the diseases of the eye has long been desiderated. We have some excellent essays, on several of the affections of that organ, but there is no work, at least that we have met with, in which is embodied our present knowledge on the subject of ophthalmic diseases. The work of Mr. Travers is valuable for its originality, and for containing opinions derived from a very ample and extensive experience, but without noticing minor faults, it does not embrace a full view of the subject, an almost entire silence being preserved with respect to the labours of others.

The treatise of our countryman, Dr. Frick, is an excellent compilation, and is well adapted for a manual for students, but it is too brief to satisfy those who have entered beyond the threshold of the science.

The manual of Dr. Weller, of Berlin, of which we have a translation by Dr. Monteith, of Glasgow, comprises an account of almost every disease of the eye and its appendages, and possess considerable merit, but it is still briefer and more unsatisfactory in its details than the work of Dr. Frick.

The treatise of the venerable Scarpa, for an acquaintance with which we are indebted to a translation by Dr. Briggs, is certainly, as is every thing that he has written, valuable; but a few only of the diseases of the eye are noticed in it, and our knowledge of these has advanced considerably since it was written.

In France they have the treatises of Demours and Delarue. The former is chiefly remarkable for the beauty of the plates; the text possesses no particular value, a large portion of it consisting of long, tedious and uninteresting details of cases. Delarue's book is far behind the present state of the science; indeed, the author appears to know little of what has been done since the days of Maitre-Jean, St. Ives, Guerin, &c.

The work, the title of which stands at the head of this article, contains an account of those diseases only of the eye, which require surgical operations, but in relation to these, it contains a mass of valuable information,* and copious reference to authorities, the collection of which must have cost much labour and research.

The author announces that he intends shortly to publish a second work, to comprise the substance of that portion of his lectures, which relates to the diseases of the eye with their medical treatment. If this proposed work, equal in value his former one, of which indeed it may be considered a continuation, it will fill an important hiatus in medical literature.

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* The author informs us, that his book contains more information on the subjects about which it treats, than any other work extant; an assertion which we believe to be true, but we confess we should have been better pleased, had we been allowed to make the discovery ourselves.

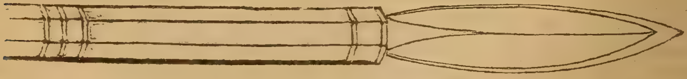
As the first edition of Mr. Guthrie's book has been for some time before the public, we shall not enter into any formal notice of it, but merely extract the account of a new method of operating for cataract, which is one of the many additions made to the present edition; at the same time strongly recommending the work to those who take an interest in ophthalmic diseases.

That the reader may understand Mr. Guthrie's new operation, it is necessary to premise, that in order to avoid some of the difficulties attendant on the division of the cornea, Dr. Jäger, of Vienna, son-in-law to Professor Beer, some time since invented a double knife, one blade of which is smaller than the other, and attached to it by a button screw, yet capable of sliding on it, upon pressure by the thumb. This knife he introduced in the same manner as Beer's, and carried it across the eye till it reaches the opposite side of the cornea, the smaller blade is then pushed forward so as to penetrate the cornea, while the larger keeps the eye steady. The operation is then completed in the usual manner.

This instrument has led Mr. Guthrie to construct another, which he considers more perfect, and "to be capable, not only of preventing nearly all the difficulties and dangers which occur in the extraction of the cataract, but of obviating them when they have occurred, either from accident or from any defect in the operator. It is a double instrument, one part being a cataract knife, of the shape of Wenzel's, the other a silver blade of the same form, but larger and blunt. The sharp steel knife is attached to the silver blade by a button screw in the handle, which admits of the knife being pressed forward in the same manner as Jäger's; whilst it is so nicely and closely fitted to the silver blade as to form one instrument, neither the point nor the edge catching when the finger is pressed along it. An opening is to be first made in the cornea, with a common large Wenzel's knife, (which I prefer to Beer's,) and of such a size as to admit the double instrument, being the first step of the punctuation: the knife being withdrawn, the aqueous humour escapes, and the iris is pressed forwards against the cornea, the eyelid being allowed to fall over it. If any protrusion of the iris should take place at the opening in the cornea, the protruded part will return to its place on gently rubbing the eyelid with a silk handkerchief, a piece of sponge, or the finger. The eyelid is now to be raised, and the double instrument introduced at the opening, the silver blade being next the iris. The silver point being larger than the steel one, easily raises the cornea and presses back the iris, so that by alternately raising and depressing the point of the instrument, it is readily carried across the eye in front of the iris and pupil, until the silver point touches the inside of the cornea, either immediately opposite the point of entrance, or as much above or below as the operator may think fit. The thumb which has hitherto been resting on or near the button screw, is now made to press it forward, and to protrude in consequence the sharp steel blade through the cornea, when the instrument readily cuts its way out, and completes the section of the cornea.

The principle on which this instrument is used, is diametrically opposed to all others. The great object of Wenzel, Beer, Jäger, and all operators, is to prevent the evacuation of the aqueous humour, until the knife has passed across the eye through the cornea at the opposite side, and has begun to cut its way downwards. The great object of this method is to evacuate the aqueous humour as a preliminary step to the operation, and to bring the eye to that state which renders the operation recommended by those surgeons impracticable. The great difficulty they have to encounter, is the falling forward of the edge of the iris, at the moment the aqueous humour is evacuated, and the necessity which then arises for bringing the knife out before the incision is completed, or of wounding the iris. It is true, rubbing the cornea, as directed by Wenzel, will sometimes cause the iris to move from before the edge of the knife, but this is only when the punctuation has been well made; for it will not always do it, and the knife must then be withdrawn, and the incision completed with the scissors or blunt-pointed knife, the edge of which often injures the iris, and always cuts with difficulty; so that three or four cuts will be required, leaving the general edge of the cornea uneven and indisposed to adhesion. In my operation, the double instrument not being introduced until the eye is quiet after the first attempt made upon it, the iris has little disposition to fall forward, as it is termed, or turn the edge of the knife, because this movement of the iris is caused by the evacuation of the aqueous humour; and when it is disposed to do so from other causes, it is prevented by the blunt or silver blade, which keeps it back in its place. The unsteadiness of the patient's eye only delays, but does not otherwise interfere with the success of the operation, neither does the toughness of the cornea, both of which are often serious impediments in the usual method of extraction, as preventing the perfecting of the incision by the single introduction of the knife, and rendering the introduction of the round-pointed knife necessary to enlarge the opening to a sufficient size for the passage of the lens through it. In the common method of operating it is dangerous to complete the operation by one incision, on account of the spasmodic action of the muscles, which often expels the lens and vitreous humour with great violence. By my method this sudden spasmodic action has had time to subside, with the evacuation of the aqueous humour, by the formation of the first opening and the subsequent falling of the lid, and the operation may therefore be completed at once with little or none of this danger. Upon the whole, I consider that this instrument, simplifies the operation in a remarkable manner, and renders one of the most difficult operations in surgery, one of very easy performance."

Fig. 1.



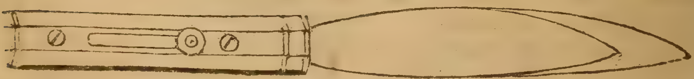


Fig. 2.

The preceding figures represent Mr. Guthrie's double knife, one blade silver, the other steel; only a portion of the handle however is represented, its whole length is three inches.

Fig. 1. shows the steel knife guarded by the silver blade, the latter projecting beyond the former.

Fig. 2. shows the knife with the silver blade uppermost, the former projected beyond the latter.

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2. *Neue Zuverlässige Heil-art der Lustseuche in allen ihren Formen; bekannt gemacht,* von Karl Heinrich Dzondi, Professor an der Universität zu Halle, mit zwei Tafeln in Steindruck. Halle, 1826, 8vo. pp. 120.

Judging by his enthusiasm, Professor Dzondi is fully persuaded of the importance of his "new and infallible cure for syphilis in all its forms," and were we not in possession of numerous and positive proofs that his views are in many respects inaccurate, we might be persuaded that his deductions were based upon sufficiently extensive and accurate observation, instead of being rather the fancy-nursed offspring of prejudice, such is the warmth of his zeal, and so positive the declaration of his conclusions. Were we sceptically inclined, we might even question the fact of his mode of cure being "new," and though willing to believe that in his experience it has proved "infallible," we think there are other views of the character of the disease quite as novel and fully as infallible, which tend to render his theory and practice equally unnecessary. We will here subjoin a sketch of his statements, previous to any further remark.

"In publishing this brief though true and exact statement of my method of curing syphilis radically, I herewith solemnly declare, that according to my best convictions, there has been no case of syphilis however protracted, which has not been radically cured by this method; or, whenever by an exact and scrupulous attention to my mode of treatment, the disease has been cured, and subsequently reappeared in any form, the reappearance has been owing to a renewed application of venereal virus. The chief foundation upon which this mode of treatment rests, and what renders it new, and unadvanced heretofore, is that the cure of syphilis is not to be effected by quantities of mercury taken at different times, but by a sufficiently large administration of it at once.* I have purposely allowed ten years to elapse before the publication of my views, until from actual results and the certain convictions thence received, I can declare that syphilis cured by this method never breaks out again."

It is altogether indubitable, that if syphilis be once *cured* by any method, it will not break out again except from the reapplication of venereal virus. The question as to the importance of any *specific* method is of more importance, and the experience of European and American surgeons equally shows that the treatment of syphilis according to general principles, is as successful and certain, as could be desired from any specific course; in proof of this, the recorded experience of Thomson and others in Europe, and of Harris, &c. in this country may be referred to.

We pass over the first chapter which contains the description of the different forms of the disease, and sketch from the second, the author's introduction to the details of his treatment, and a fuller exposition of his views as to the operation of the medicine.

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* Dass eine hinreichende grosse Gabe auf einmal gegeben werde.

"All the forms of syphilis described in the foregoing chapter, may be radically cured according to the present treatment; all, I say, even to the oldest and most inveterate. By this method—*I speak from experience*—it is of no consequence how long a time the patient has been syphilitic! days, weeks, months, years—it is all the same! a pox which has raged in the system for twenty years, can be cured, even in the lapse of four weeks—and with the same quantity of medicine, radically cured, as one of but twenty days standing. Yes, such cases demand as long a treatment and as great a quantity of medicine, as one of twenty years continuance! a great, important and entirely new truth! a truth which I have been convinced of during ten years past.*

"During my travels in 1821-22, through France, Holland, England, Scotland, Ireland, and a great part of Germany, with a view of observing the different modes of treating syphilis, I found the principal part of the treatment the same. They introduced by internal or external means, different proportions of mercury, during a considerable period, into the systems of their patients, until the outward signs of the disease had disappeared; patients were then thought to be cured, and very little trouble was taken as to what might ensue from the activity of the medicine driven into the system. If the disease was obstinate, the treatment was as obstinately continued, for many months in the same or in larger doses. If this were insufficient, another preparation was selected, and the patient would be treated and maltreated with mercury for years.

"In most of the hospitals it was not remarked, that by means of a moderately high temperature the poison of mercury, a far worse poison than even that of the venereal contagion, would be re-introduced from the exhalations of the skin. In Paris I found in the venereal hospital that the window was left open all day in very cool weather, and in fact, by aid of a pulley it was constantly kept so; the poor patients were covered with only light woollen clothes, and could scarcely keep off the cold, much less procure gentle perspiration. None but the experienced observer can foresee the consequences of this condition!

"In England, under similar circumstances, calomel is administered in such large and powerful doses that a fearful salivation ensues, which sometimes terminates in inflammation and total adhesion of the mucous membrane of the mouth, so that the unfortunate patients, cannot throughout their lives, separate their teeth a straw's breadth from each other. I saw two instances of this kind in the Middlesex hospital under Charles Bell!

"Among all the methods, it is certain that the mode of inunction, (Louvrier's) is the most terrible, and is still not powerful enough to cure radically long-continued forms of the disease. I have cured twenty-one cases in which inunction had been unsuccessfully employed.

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* That we may not be suspected of mistifying the Professor, we subjoin the original of the two last sentences—"Es kommt bei dieser Methode—*ich spreche aus Erfahrung*—ganz und gar nicht auf die Zeit an, wie lange ein mensch syphilitisch gewesen ist. Tage—Wochen—Monate—Jahre, dies ist ganz gleich!—eine Syphilis welche zwanzig, sage zwanzig Jahre im Kœrper Wuthete, kann in eben der Zeit —vier Wochen—und mit enem der Quantitat Arzney geheilt, grundlich geheilt werden als die welche erst Seit zwanzige—Jahrige! Eine grosse wichtige, ganze neue Wahrheit! Eine Warheit welche sich mir nun seit zehn Jahren bewarht hat." p. 29.

"The most unpleasant of all methods is beyond doubt that of purging with large doses of calomel, by which treatment not one syphilitic patient is cured." p. 31.

We shall leave our author to arrange the latter statement with our countryman who claims to be the originator of this mode of treating syphilis, at least in the United States, and go on to other observations. We do not deem it necessary to delay for the purpose of examining his propositions concerning the poisonous qualities of mercury, or of the manner in which its influence displaces the venereal virus. It might under other circumstances be worth while to consider his declaration, that no syphilis can be cured without mercury, were it not that every one almost can satisfy himself of the contrary by making inquiries among our practitioners, or by referring to the published experience of most respectable surgeons.

Professor Dzondi believes that corrosive sublimate is the medicine, which under proper direction is best adapted to the cure of all the forms of syphilis, and in fact it constitutes his "infallible cure." He commonly gives the sublimate in form of pills, made up with crumb of unfermented wheat bread and sugar, as follows:—℞. Hydrar. Sub. Corros. gr. xij. Solve in aq. dist. q. s. adde Micæ panis albi et Sacchari albi, āā q. s. ut ft. pill. ccxi.—The pills are to be taken every other day; beginning with four, which are to be taken once a day, after dinner; not a quarter or half an hour after, but immediately afterwards, swallowing some water or beer to wash them down. The number of pills is to be increased at each time of taking, by adding two, so that by rising from 4 to 6, 8, 10, the patient at the last days of the treatment takes 30, or a grain and a half of sublimate at a dose. The pills can be made larger when the number is so much increased as to render the dose troublesome. Laudanum is to be used if rendered necessary by pain in the belly, &c. The whole cure lasts twenty-seven days,* and must throughout and without exception, and under all circumstances be completed, if one desires to accomplish a radical cure. Even when all symptoms of disease have disappeared during the first half of the cure.

We cannot for want of room follow the progress of the "infallible cure," nor add the Professor's judicious advice as to warm clothing, diet, &c. There are many very good and useful observations on the secondary forms of syphilis, but nothing very new or uncommon. We must therefore refer our readers for further particulars to the work itself, which is by no means long or tedious. An ill-natured critic might find room to indulge himself in considerable ridicule; an impertinent or envious one, might improve the opportunity of endeavouring to lift himself into notice, by reviling an individual, who has character and respectability; but every candid inquirer would make allowances for the enthusiasm which caused the author to be fond of his own doctrines and practice, and give him the credit he undoubtedly deserves, of being honestly desirous of contributing to the utmost of his ability to the advancement of his profession, and the good of his fellow creatures. J. D. G.

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* "Die ganze kur dauert 3 mal 9 Tage."

3. *Manual of Pathology, containing the Symptoms, Diagnosis and Morbid Characters of Diseases: together with an Exposition of the different methods of Examination applicable to Affections of the Head, Chest and Abdomen.* By L. Martinet, D. M. P. Resident Physician of the Hotel Dieu. Translated, with notes and additions by Jones Quain, A. B. Demonstrator of Anatomy at the Medical School, Aldersgate-street. London, 1826, pp. 310.

This work is intended as a clinical guide. It contains first, a brief statement of the necessary requisites for the proper conduct of clinical pursuits; and a detailed account of the improvements which, of late years, have been introduced in the methods of investigating diseases: second, a condensed but complete account of every thing necessary to enable the observer to distinguish diseases from each other, and, to draw up with precision, the history of them. To this is added an enumeration of the symptoms of the different affections, and the morbid alterations which they induce. M. Martinet in his work has freely availed himself of the labours of Laennec, Andral, Lallemand, Serres, Louis, Broussais, Rostan, Chomel, Double, Landré, Beauvais, and Professor Recamier, and the office which he has for some time filled at the Hotel Dieu, has enabled him to verify repeatedly, by actual observations, the correctness of the statements he has made.

We strongly recommend M. Martinet's manual to the profession, and especially to students; if the latter wish to study diseases to advantage, they should always have it at hand, both when at the bed-side of the patient, and when making post mortem examinations. We hope that one of our enterprising Booksellers will reprint Mr. Quain's translation; it appears to be faithfully executed, and contains some interesting additions.

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4. *Chirurgische Kupfertafeln, eine auserlesene Sammlung der noethigsten Abbildungen von äusserlich sichtbaren Krankheitsformen: u. s. f. Zum gebrauch für praktische Chirurgen.* Von L. F. V. Froriep, M. D. &c. 4to. Weimar.

This work consists of a selection of the most valuable surgical engravings, illustrative of important operations, and of the instruments, bandages, and other apparatus employed by the most distinguished practitioners throughout the world. A brief descriptive text accompanies the plates, explanatory of the various operations, or indicating the diagnostic signs of the diseases exhibited in the engravings. These figures are copied from a great variety of works, or from detached papers published in the periodical journals, thus supplying the possessor of the work with a mass of surgical information which he might elsewhere seek in vain in any one book. Thirty-seven numbers of this work are now before us, comprising more than a hundred representations of surgical diseases, operations or apparatus, displaying in a very satisfactory manner the most approved resources of our art. The engravings, though by no means elaborately wrought, are expressive and accurate; a number of them are done with considerable elegance, especially some which are coloured. In addition to the extensive collection from standard works, there are some highly interesting original engravings; among others the portrait of a youth labouring under the morbus cœruleus, and a representation of two stages of ophthalmoblenorrhea which are very interesting. The contributions of German surgeons to the improvement of the art are shown by this work to be very numerous, and many of them of much importance, but no undue preference for the surgical practice of any country is exhibited. Dr. Froriep draws liberally from all accessible sources, and has done full justice to every individual who has contributed to the advancement of surgical science, however obscure such individual may otherwise have been. We should consider such a work as that of Froriep, with an English text, as a gift of great value to American surgeons. J. D. G.

5. *Lehrbuch der gerichtlichen Medicin. Zum Behuf akademischer Vorlesungen; und zum Gebrauch für gerichtliche Aerzte und Rechtsgelehrte entworfen.* Von Adolph Henke, M. D. &c. Berlin, 8vo. pp. 471. 1827.

These Elements of Medical Jurisprudence have been exceedingly popular in Germany, and have passed through five editions since the year 1812. The manner in which the subject is treated, is well suited to make this book a favourite, as it is at once clear, concise, and exact; the author discussing the various important topics belonging to this department of medicine, with the energy which is inspired by a vast fund of experimental knowledge, enlivened by all the light derivable from the accumulated efforts of others. There are ample references throughout to the most approved authors who have investigated or treated of the different questions examined, as well as numerous references to separate tracts or essays on such subjects scattered through periodical papers or contained in the transactions of learned bodies. The evidences which are thus supplied of the zeal of the German physicians in pursuit of knowledge is both surprising and satisfactory; the medical literature of other countries appears limited indeed, when compared with the exuberant productiveness of the industrious professors and students of the German schools. Did not other more urgent avocations interfere, we should be tempted to translate this volume of elements of forensic medicine, which is so well adapted to the purpose of enabling the reader, with a small degree of application to obtain a highly advantageous view of the principles of this important science. J. D. G.

6. *Clinique de la Maladie Syphilitique.* Par M. N. Devergie, D. M. P. et G. Chirurgien major Démonstrateur a l'Hospital Militaire d'Instruction du Val-de-Grace, Professor d'Anatomie et d'Chirurgie, &c. Enrichie d'Observations Communiquées par Messieurs Cullerier, oncle, Cullerier, nevue, Bard, Gama, Desruelles, &c. &c. avec Atlas Colorié. Paris, 4to.

This work is now publishing in Paris, in numbers, each containing five plates and about sixteen pages of letter press. We have received the first seven numbers; these contain the preface and introduction to the work, and representations of the healthy male and female organs, and various forms of syphilitic disease.

The introduction contains observations, 1st, on the origin of syphilis; 2d, on the different theories entertained with regard to its nature; 3d, on the modes of treatment successively adopted for its cure.

M. Devergie is of opinion; "1st, that the disease did not originate in America;

2d, that it did not arise exclusively in Europe at the end of the fifteenth century; 3d, but that it was known in different climates before there was an easy communication between their inhabitants; 4th, that it has existed at all times, and ought to be considered as the result of the abuses of love, of debauchery, and libertinism, rather than as the offspring of a particular virus." He then enters into an investigation of the different opinions entertained by authors respecting the nature of syphilis, and adduces strong, and we think satisfactory proofs, that it is not produced by any one specific contagion, but that it may originate spontaneously—may be produced by masturbation—over-excitement of the genital organs, especially in women, from too frequent a repetition of the act of coition, &c. &c.

M. D. has passed twenty years in military hospitals, and was attached during ten years to the same division of cuirassiers; he has thus had ample opportunities for collecting facts relating to syphilis, and to form an estimate of the value of the different modes of treatment.

He has seen the disease repeatedly cured spontaneously, without any subsequent constitutional effects occurring, and he considers many of the supposed secondary forms of the disease as produced by the remedies given for its cure. He recommends the physiological treatment, viz. local antiphlogistic treatment, and above all, leeches, &c.; see propositions 405-415 of the eminent French reformer.

The plates which accompany these numbers, present as beautiful and accurate representations as we have ever seen, of several of the forms of venereal disease.

QUARTERLY PERISCOPE.

FOREIGN INTELLIGENCE.

ANATOMY.

1. *On the Vascular Appearance of the Human Stomach, which is frequently mistaken for Inflammation of that Organ.* By John Yellowly, M. D.—In our original department we have given the result of some inquiries relative to the mucous membrane of the stomach. A notice of a paper on the same subject, published in the fourth volume of the Medico-chirurgical Transactions, by Dr. Yellowly, will probably not be uninteresting here. This paper is a sound and plausible one in most respects, and exhibits such good talents for observation, that in this country, at least, it has on all discussions respecting the pathology of the stomach, been brought forward as proving the non-existence of inflammation in certain diseases. The reflections at the conclusion of his paper are evidently those of a mind not far from the truth, but which had been kept undetermined and in equipoise, perhaps, by the comparative novelty of the subject, at the period when he made his observations.

Notwithstanding the general merit of his paper, the tabular view of twenty dissections is very unsatisfactory in not giving, with but few exceptions, the duration of the diseases under which the patients perished, the medicines which they took just before death, nor the quantity of contents in the stomach, all of which influence somewhat its appearance. Neither has he stated, with sufficient accuracy, the number of hours which intervened between the death and the examination of the individuals. I mention these as objections to the plan of the paper, and if we also inquire particularly into each dissection, it will be observed that there is scarcely a case which would be set down to gastric inflammation, according to the rules we have inculcated. It is true that there is redness and vascularity in all the stomachs, but none of them presented the red, blotched, and motley appearance of genuine acute inflammation of the mucous membrane; on the contrary, the blood seems to have been arrested in the capillary vessels instead of being extravasated. The only cases where extravasation is spoken of are exactly those where we would expect to find it, to wit: No. 1, apoplexy, No. 2—3, traumatic irritation, and No. 19, protracted fever with irritability of stomach.

Mr. Yellowly next gives the dissection of five criminals who were executed by hanging; as the fact is generally conceded, and has been pointed out by Bichat and others, that this mode of death produces a great accumulation of blood in the capillaries throughout the whole system, we find in Mr. Yellowly's cases a correspondence with our previous knowledge on the subject. Cases 1st and 3d, seem to have presented the red blotches so remarkable in yellow fever, and others of high gastric irritation. English criminals, we understand, are much in the habit of copious potations of alcoholic drinks just before they are executed, it would have been more satisfactory if Mr. Y. had inquired on this subject, and reported accordingly. Mucous membranes, however, when congested by any cause, either mechanical or otherwise, bleed so readily, that strangulation alone might have produced the appearance. Case 2d was examined at so remote a time from death, to wit: seventy-two hours, and presented the stomach so completely dyed by infiltration, that no rigid deduction can be drawn from it, either one way or the other. Cases 4th and 5th do not present peculiarities leading to any very distinct conclusion.

Fig. 1, and fig. 4, of Mr. Yellowly's plate, I should unhesitatingly set down to acute inflammation, were similar appearances met with in a dissection. Fig. 2, and fig. 3, are equivocal, they may or may not belong to inflammation, they resemble, however, very much the stomachs of old drunkards.

Mr. Yellowly does not seem to be apprized of the fact that the extreme redness of acute inflammation of the stomach does not last for much more than six or eight days, and that it afterwards disappears to a very great degree, indeed sometimes almost entirely, leaving only a dark yellowish, motley tinge, with softening, or even a total removal of the mucous coat.

Mr. Yellowly expresses his conviction that the thinness of the stomach at its greater end, so frequently met with, is not a diseased state, but a natural one, he therefore rejects the testimony of Mr. Hunter, and others, on this subject, and is disposed to refer it to mistake. But though the left extremity of the stomach is not so thick as the right, yet the following simple experiment will enable any one to detect a removal of the mucous coat. Let the suspected part be floated for a few minutes in water, in which case the edge of the erosion will become as distinct as the edge of an ulcer on the skin, under common circumstances. Again, in those cases of erosion, so far from the blood-vessels not being injured, they are so much so that a wax injection may be freely pushed through them into the cavity of the stomach, an example of this is now preserved in the anatomical cabinet of the University.

Mr. Yellowly, in detailing the experiment on the dog, (p. 416,) poisoned by corrosive sublimate, says that there were dark coloured "patches" of coagulated blood in the villous coat of its stomach, "very similar to that which is sometimes found in an inflamed serous membrane, on which coagulating lymph had been very recently deposited."* He has here made a very accurate and judicious observation, which, if it had been applied as a test to his other dissections, would have dispelled most of his doubts and errors. For the patches of red blood in an acutely inflamed stomach, bear the strongest resemblance to the patches of red blood found in the substance of the factitious membrane of a recently inflamed pleura, and seem to disappear by the same process, absorption.

W. E. H.

2. Tiedemann *on the Membrana Pupillaris.*—"Dr. Jacob has proved that this membrane does not disappear towards the seventh month of fœtal life, but that in most cases it exists at birth. Towards the seventh month it loses its blood-vessels, becomes perfectly transparent, and gradually diminishes till it is entirely absorbed a short time after birth. From eight to fifteen days from birth slight traces of this membrane may be discovered. Dr. Jacob once succeeded in injecting the membrana pupillaris in a fœtus nearly at its full time. M. Tiedemann has repeated the experiments of Dr. Jacob, and confirmed their accuracy. He has injected the membrane in a fœtus which died during labour; it exhibited an extremely delicate network of vessels, well filled with injection, as also were the vessels of the iris. The injection was composed of isinglass and cinnabar."—*Bulletin des Sciences Méd., April, from Zeitschrift für Physiologie.*

3. *Account of a Remarkable Production resembling a Tail.* By Arthur Jacobs, M. D.—This very curious production was observed in a young man, it had ex-

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* Mr. Y. has made a little mistake about the position of these patches, they are not in the inflamed natural pleura, but in the factitious membrane of coagulating lymph. Just opposite to them are found in the pleura, the red points of the vessels through which the extravasation occurred, they look like those on the dura mater, when the skull-cap is first torn up.

isted from birth, was about the size of the closed hand of a large man, and was situated upon the lower part of the sacrum. Upon its most convex part was an orifice, through which the finger could be introduced and passed round an irregular resisting body, which partly projected through this opening. This extraordinary production adhered firmly by one extremity to the spine, the connexion was osseous, but so spongy as readily to yield to the knife. It was extirpated by Mr. Jacobs, Senr. and on examination it was found to be furnished throughout with a bony core, or centre, consisting of separate pieces, distinctly joined to each other with perfect synovial capsules. Mr. Jacobs adds, that he "has been assured by a person of veracity, who states the fact from actual observation, that he knows an individual who has a production, or continuation of the os coccygis, which can be felt through the clothes, and causes inconvenience when the person sits; and that it is generally believed that several members of the same family have a similar appendage."—*Dublin Hospital Reports, Vol. IV.*

4. *Anatomical and Physiological considerations on the connexion of the Placenta with the Uterus, on the Vascular Communications between the two Organs, and the Mode of Circulation of the Fluids.*—M. Lauth, Jr. thinks that although anatomists and physiologists have paid much attention to the mode of union of the uterus and placenta, and the reciprocal exchange of blood between the mother and fœtus, they have not given us clear views of the structure of these parts, nor of the manner in which they perform their peculiar functions. The author's experiments lead him to deny, that the uterine placenta really exists under the form which has been assigned to it. He has been able to inject by means of very fine tubes two different orders of vessels, visible in the membrana decidua. The one runs from this membrane to the placental vessels, and the other from the placenta to the vessels of the membrana decidua, all which appertain to those of the placenta. These vessels are the lymphatics, of which the former separate from the blood of the mother, the materials necessary for the fœtus, and the second draw from the blood of the fœtus the matters which ought to be separated from it. Finally, according to the author, the placenta appears to perform in the fœtus, the functions which are subsequently performed by the intestinal canal, rather than those of the lungs, which is attributed to it at present. M. Breschet, in a note at the end of this memoir, informs us, that recent microscopic observations, go to show that the globules of blood of the mother do not resemble the globules of blood of the fœtus.—*Journal des Progrès, from the Rép. Gén. d'anatomie et de physiologie pathologiques.*

PHYSIOLOGY.

5. *Anomaly.*—M. Levrat, Senr. reported to the Medical Society of Lyons, the case of a woman, who, after having given birth three times to twins, a male and a female each time, was delivered at the fourth and a half month of pregnancy, of a male child, and milk was secreted in the right breast only; four months afterwards she was delivered of a perfect female infant, and at this period milk was secreted in the left breast alone.—*Annales de la Méd. Phys. April,* 1827, *from the Compte rendu des trav. de la Soc. de Méd. de Lyons. Par J. M. Pichard, D. M.*

6. *Periodical Dumbness.*—"M. Itard informs the Royal Academy of Medicine, that he had seen a female who is dumb at each menstrual period; this he attributes, justly, to a cerebral congestion taking place at these epochs."—*Annales de la Méd. Phys. Feb.* 1827.

7. *Circulation of the Blood.*—The experiments of Dr. Barry, on the motion of the blood in the veins, has excited much attention, and the conclusions he has drawn from them have met, especially in England, with considerable opposition. Dr. Arnott, in his late treatise on the elements of physics, notices in a manner not very remarkable for its sound philosophy, the theory some years since advanced by Dr. Carson, that the return of the blood to the heart was effected by atmospheric pressure, and also the experiments of Dr. Barry, and asserts, "1st, That the veins being tubes, free to collapse, no pump can lift liquid through them. 2d, That the suction powers of the chest, in ordinary respiration, is too weak to lift liquid a distance of even one inch, through tubes of any kind." Dr. Carson, in a very ingenious paper in the *London Medical and Physical Journal*, for August last, refutes these assertions. He does not, however, deny that the force of the heart and arteries may be sufficient to move the blood, in certain circumstances, through its whole course, but he maintains that this is not the force employed for that purpose. The well known fact which he adduces, viz. that when a vein is opened in the arm or leg, without the veins above the opening being compressed by ligatures, little or no blood flows, is conclusive, at least, to our minds, on this point; for the blood certainly, on the supposition of its being propelled by a force *a tergo*, would find its way rather out of the opening, than proceed in the vein, carrying before it a column of blood, one or two feet in height.

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8. *Case of Extraordinary Constipation.*—It is surprising what wide deviations from a healthy state of the functions, nature will accommodate herself to, and that while some fall victims to injuries so slight as scarcely to be cognizable, in others, life is sustained under the infliction of the most extensive derangements. Dr. Crampton relates, in the *Dublin Hospital Reports*, vol. iv. the case of a young lady who was attacked in February, 1825, with a severe diarrhœa, which ceased after a few days, and was succeeded by a costive state. After some time the abdomen became tender and inflated, "she seldom had a stool more than about once a week; all medicines were rejected from the stomach; the greater part of her sustenance, which was all liquid, shared the same fate; what she brought up was offensive in the extreme, and often evidently stercoraceous; in some instances it had a urinous taste and smell, little urine being either secreted into or passed from the bladder. Notwithstanding the uncomfortable condition in which she existed, after a little time it became evident that she bore her distress and pains with more facility. The symptomatic feverish state subsided, the pulse became natural; she took liquid food in sufficient quantity, there was less emaciation, the vomiting was less severe, but she threw up every day, and the intervals between the times of emptying the bowels became longer, the urine was seldom passed, and then with pain, and in very small quantity; the catamenia were still regular. She even appeared to have regained a little flesh, and slept well. Her usual sustenance was tea, toast, milk and gruel, but no solid food; no swelling now, or fulness in the abdominal region; she has either lost the use of her lower extremities, or is averse to use them. She is now in her 37th year, and has been in the state described for the last seven years. For the last eight months she has had no passage from her bowels, and only two or three during the preceding year, and she scarcely passes any urine."

Dr. Crampton recollects a case in Steevens's Hospital, in which "both the bowel and urinary discharges were nearly suppressed. When she had a stool it was considered quite an extraordinary occurrence, and she never passed urine except when relieved by the catheter. She vomited occasionally excremental matter, and for a considerable time, when no urine appeared to be secreted, she threw up a fluid of a urinous taste and smell. She lived for several years."

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9. *Pulsation in the Veins.*—A very interesting case of this is recorded by Dr. Davies in the fourth volume of the *Dublin Hospital Reports*. It occurred in a girl aged six years, labouring under acute hydrocephalus, which terminated

fatally. There "was a pulsation in all the veins, distinct and well marked, synchronous with that of the arteries, and in the veins of the extremities, perceptible to the eye, even at the distance of two yards. The veins were larger than is usual at her period of life, and pressure upon any of them stopped the pulsation between the part compressed and the heart, so that it obviously could not be caused by regurgitation from the auricle. The pulsation in the part of the vein, towards the extremity, was rendered much stronger, and more distinct, provided the return of the blood to the auricle was not completely obstructed, but if the compression was so strong as entirely to obliterate the calibre of the vein, that part of it which became tense and distended with blood so far as the next valve, after a few seconds, lost the pulsation altogether. The pulsation of the heart was somewhat stronger than usual at her age; the pulsation of the veins was softer than that of the arteries, and was completely stopped on compression of these latter vessels." The arteries were injected after death, "but presented no preternatural communication whatever with the veins, neither could any artery be discovered in the immediate vicinity of these latter vessels which could throw a doubt on the fact, that the pulsation had been continued from the heart, through the arteries and capillaries to the veins."

PATHOLOGY.

10. *Case of gangrene of the lung; dilation of the bronchial tubes; cavity in the right lung; bronchitis.* By Drs. Graves and Stokes.—This is an extremely interesting and rare case. Laennec, Andral, and Bayle, all unite in setting down the uncircumscribed gangrene as one of the rarest of pathological phænomena. Laennec states that he met with it but twice in the course of twenty-four years observation, and that but six cases occurred in the hospitals of Paris during that period.

Case.—L. B. ætat. twenty-eight, full habit—thorax well developed—had been subject for the last year to palpitations, cough, and pain in the sides. *November* 1st, rigor, with increased pains. *November* 2d, cough frequent—expectoration of a dark red colour—pulse 144—lays on his right side—breath very fœtid—cadaverous smell from the whole body—countenance of a leaden hue—lips livid. On percussion the right side was dull anteriorly, on applying the stethoscope from about two inches above the mamma to the inferior portion of the lung, we heard a sound similar to that produced by the retraction of a piston; on expiration an obscure crepitus was audible. About the mamma, cavernous respiration, gurgling and pectoriloquism. Over the left lung respiration puerile, with slight crepitus about the mamma.

Diagnosis. Suppurative inflammation of the lower lobe of the right lung; a cavity anteriorly in the lower part of the middle lobe; slight inflammation of the lower part of the left lung.

Ordered, venesection ten ounces; cupping glasses to the right side, and afterwards a large blister; small doses of calomel and hyosciamus, and an abundant supply of warm diluents. Evening—much relieved, pulse 96, cadaverous smell disappeared, no expectoration—the peculiar respiration in the superior right lung not audible—skin dry—calomel and hyosciamus omitted—small doses of antimonial, with a little calomel to be taken every second hour.

November 3d.—Lying on his left side, which he has not, he says, been able to do for the last six months. Expectoration about two ounces, purulent, sanious, and presenting the prune juice colour in some degree.

November 6th.—A loud muco-crepitating rale over the whole left lung—cavernous respiration evident over a more considerable portion of the right lung, with confused pectoriloquism; posteriorly the murmur was natural—crepitus in the antero-superior portion.

Diagnosis. General bronchitis of the left lung; excavation in the right lung increasing.

Evening.—Violent pain in the left side—pulse 110, small—distinct crepitus mixed with sonorous rale over the postero-inferior part of the left side.

Diagnosis—pleuro-pneumony of inferior part of left lung—no effusion into the cavity.

Was leeched freely and took a large dose of Dover's powder.

November 7th.—Lying on the right side—had passed a good night—pain greatly diminished—expectorates some blood. Crepitus less audible, of a more humid character—sound on percussion over left mamma, natural—cavernous respiration less distinct.

November 8th.—Last night expectorated a large quantity of blood suddenly—breath more offensive—gurgling evident over a space nearly four inches about the right mamma. Opium and sulphate of quinine were ordered, a small quantity of wine allowed, and a seton inserted over the cavity.

November 9th.—Better; expectoration resembling the juice of prunes mixed with grumous blood. In the evening had a severe rigor, and another on the 10th, and on the 11th died.

Dissection.—" Body fat and muscular; some œdema of the right leg.

" On raising the sternum the left lung collapsed, and on a superficial view appeared healthy, and free from adhesions. The right lung felt solid, and completely filled the right cavity of the thorax; the adhesions to the pleura were so strong, that in detaching the lung the pleura costalis was torn away. A perpendicular incision being made on the antero lateral face, the superior portion was found inflamed to the first degree for about an inch downwards, when it passed into the second in spots, between which the substance of the lung was soft, and of a reddish yellow colour, but still crepitating, giving to the lung the appearance of a piece of Egyptian sienite. On the antero interior line, about three inches from the summit, the lung felt solid, and the surface of the incision was of a dark grey colour, and motley appearance. An anfractuous cavity was then discovered, having three prolongations or horns, one extending upwards, another downwards and backwards, and a third to the right side. A yellowish semifluid matter flowed slowly from the lateral prolongation; but the other parts of the cavity were filled with a substance resembling putrid flax, and exhaling an exceedingly fœtid odour. Several dilated bronchial tubes opened into it from behind; its parietes were firm, but irregular, and lined with a cartilaginous membrane, which extended to the neighbouring bronchial tubes. Bands of condensed pulmonary tissue were observed in several places forming elevations on the parietes. Below this cavity we found a solid mass, about the size of two walnuts, in which a small cavity was found, not communicating with the bronchial tubes. It had no lining membrane, and the substance of the lung around was in the state of grey induration. Most of the bronchial tubes in this lung were dilated, forming culs-de-sac at their terminations, where they were nearly as wide as at their origin. The lining mucous membrane was of a deep red colour, soft and swollen; no ulceration could be detected.

"On detaching the left lung from the diaphragm, the fingers of the operator entering the substance, and a large cavity, capable of containing a moderately sized apple, was found, of a completely gangrenous appearance; from its sides a blackish sanies flowed in great abundance. The edges of the cavity were ragged, and in a state of deliquescent sphacelus; no bronchial communication could be found, but the affected part was surrounded by a band of hepatization, beyond which the tissue was healthy and crepitating.

" The mucous membrane of the bronchial tubes was almost black; this appearance extended to the trachea, and gradually fading, terminated at the rima glottidis. Some adhesions were found, and the inferior portion of the pleura was highly vascular. The right ventricle was enlarged, soft and pale; the pericardium presented the white patches of Laennec without adhesions." —*Dublin Hospital Reports, Vol. IV.*

11. *Swelling of the Extremities.*—But two species of these have been acknowledged by pathologists, viz. phlegmasia dolens and elephantiasis or bucnemia tropica of Dr. Good. Dr. Graves has observed two sorts of tumefactions which are pathologically different from either of the above; the symptoms and characters of which are laid down. Of the first species two cases have been published, one by Mr. Chevalier in the 2d vol. of the Medico-Chirurgical Transactions, and the other by Söemmering.

The second species may occur either in the upper or lower extremities, and is by no means an uncommon disease in Ireland. A case of this affection will be found in Haller's Disputationes Chirurgicæ, vol. v. p. 463. Dr. Graves has given a coloured drawing, representing the hand of a girl in whom the disease had lasted about one year. When the case is not of long standing, Dr. G. recommends during the febrile paroxysms, an antiphlogistic treatment and purgatives; repeated application of leeches to the inflamed parts, cold lotions, lead washes, &c. During the intermissions, rest of the affected extremity, moderately tight bandages, bark, and if it fails, arsenic. Change of air should always be recommended, and the antiphlogistic plan resumed the moment the inflammatory paroxysms occur.—*Ibid.*

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12. *Pulmonary apoplexy.*—In the description given by Laennec of this disease, it is laid down that there is a well marked line of demarcation between the affected portion and the healthy pulmonary tissue. In a case described by Drs. Graves and Stokes, in the fourth volume of the *Dublin Hospital Reports,* this did not exist, "the engorged generally passing into the healthy by imperceptible transitions." The case is also remarkable on account of its extraordinary extent, the disease not being limited to one part, scarcely any portion of either lung being free from spots containing extravasated blood. In the cases described by Laennec, the disease occupied but a small portion of the lung.

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13. *Propagation of Inflammation by Contiguity.* By R. Graves, M. D. and W. Stokes, M. D.—"In the dissection of a fatal case of enteritis, we observed that the omentum, which lay extensively over the intestines, was healthy, except where it was in contact with the inflamed portions of the intestines. These portions were circumscribed and limited in extent, some highly vascular and red, others in a gangrenous state, and one actually perforated. The perforation was very small, not exceeding a line in diameter. The inflamed portions of the omentum were very vascular and red, about the size of a dollar, and *lay exactly over the inflamed portions of the intestine.* It is to this correspondence in their situation with the inflamed parts of the intestine, that we wish to direct the attention of our readers. Similar facts have been frequently observed in diseases, but, as far as we know, they have never been satisfactorily explained. Thus when a portion of the pleura pulmonalis is much inflamed, a portion of the pleura costalis corresponding, or opposite to it, is always found to be also inflamed. When, on the other hand, inflammation spreads from the intercostal muscles to the lungs, as in the conversion of pleurodyne into pnemonia, it does not traverse the pleura, in order to reach the lungs, by following the reflection of this membrane over them, but passes at once, and directly from the pleura of the ribs, to that of the lungs, between which there was previously no direct communications.* To this circumstance is owing the adhesions between serous membranes, so readily formed by inflammation, for when a part of one becomes inflamed, the portion of the other, in contact with the inflamed parts, assumes also an inflammatory action; and lymph being thrown out by both, a false membrane is finally formed, not less intimately connected with one than with the other.

"In enteritis, we have repeatedly observed that the peritoneum lining the abdominal parietes is most inflamed in those parts which had been in contact with the most inflamed portions of the intestines. Another very important analagous fact was observed by Dr. Wilson Philip, in his Treatise on Indigestion. In the second stage of that disease, the pylorus, frequently becomes inflamed, producing tenderness in the epigastrium, (page 105;) and as the pylorus he observes, 'lies with the thin edge of the liver upon and in contact with it, the inflammatory process is communicated to the thin edge of the liver, and thus inflammation of the liver is occasioned, and terminates in evident enlargement and tenderness of that organ.'

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* See Wilson Philip on Indigestion.

"We venture to propose the following explanation of these facts. When a portion of a serous membrane becomes inflamed, it is rendered highly vascular; it becomes at first dry and rough, but afterwards exhales either a morbid fluid secretion, or coagulable lymph; there is some reason to believe that its temperature is also increased. Now in this state of things, that portion of the opposite membrane which corresponds to it, is thus exposed to the contact of a membrane, whose *sensible properties* are altogether altered from their natural state, and which may therefore be now considered to be as it were a *foreign body*, which presenting a surface quite different from that which the sensibility of the opposite membrane had been accustomed, must of course act as a stimulus to it, and thereby excite in it an inflammatory action. This explanation seems at least more satisfactory than Mr. Hunter's sympathy of contiguity.—*Ibid.*

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14. *Whitish Stools.*—These were formerly attributed to the loss of chyle by stool, Dr. Baillie thought at least one variety of them depended on a copious secretion of calcareous matter from the intestines. Dr. Graves considers them as a secretion from the mucous membrane of the rectum, when in a state of irritation or sub-inflammation, and to be analogous to the white and viscid discharges from other mucous membranes, as from the conjunctiva, bronchial tubes, urethra, vagina, &c. This affection of the rectum may extend to the small intestines, as is proved by the examination of persons who have died of East India Cholera.

Case.—Dr. Graves was applied to by a gentleman who had had dysentery, the prominent symptoms of which had disappeared. His appetite was good—digestion tolerable—but he was daily becoming more emaciated and weaker. He had two natural stools daily, without tenesmus, but complained of eight or ten sudden calls to stool, during the twenty-four hours, attended with an impossibility of resisting the bearing down and weight felt in the rectum; these evacuations were preceded by no premonitory sensations, and consisted merely of two or three table-spoonsful of muco-gelatinous matter. Numerous remedies were tried without benefit, at length Dr. G. resolved to try strychnine, on the authority of Dr. Rummel. It was given in doses of one-twelfth of a grain, in the form of pill twice a day, which completed the cure in three weeks.—*Ibid.*

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15. *Black or very Dark Stools.*—These may be caused, 1st, by an effusion of blood into the intestines, causing true melania; 2dly, by black bile; 3dly, by a secretion of dark-coloured matter from the mucous surface of the alimentary canal. A very remarkable case of the latter, in which very great quantities of matter, sometimes of the consistence and colour of tar, and sometimes resembling ink, were passed by stool for ten or twelve days in succession, was cured by the use of oil of turpentine, and other stimulating tonics.—*Ibid.*

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16. *Contagious Psoriasis.*—Duffin and Bateman maintained that scaly eruptions are not contagious. Dr. Graves has recently seen a case which seems to him to prove that they may be communicated by contact under certain circumstances. A gentleman of cleanly habits was affected for many years with psoriasis palmiaria. Last year Dr. G. was called to see this gentleman's butler, who had an extensive psoriasis on the back of the hand, which he attributed to wearing his master's old gloves. Two months afterwards, the house maid was affected with the same complaint, which she attributed to contact with her

master's linen, in making his bed. These facts, though they may render probable, certainly do not prove the contagious nature of the disease.

The most extensive case of psoriasis diffusa which Dr. Graves ever saw, occurred in a boy, from sleeping on some fleeces of wool without his shirt. Dr. G. has also seen an entire family of children infected with a disease resembling itch, from playing with a mangy dog.—*Ibid.*

17. *Rheumatism of the Temporal Muscles.*—This complaint often causes much uneasiness, being confounded with lock-jaw. Dr. Graves has seen two cases in which the inflammation and contraction of these muscles was so great that the jaws were firmly closed. There was no constitutional derangement—the tenderness and pain are greatest just above the zygoma. A cure is easily effected by the repeated application of leeches, and proper anti-rheumatic remedies.—*Ibid.*

18. *Fracture of a Cervical Vertebra by Muscular contraction.*—M. Réveillon related to the Royal Academy of Medicine at the sitting of the 8th of February, the following curious case. "A soldier, an excellent swimmer, plunged headforemost into the Sambre. His companions seeing him struggle for some minutes, thought him in jest; but, perceiving that he became motionless, they ran to his assistance and dragged him out. On recovering his senses there was found neither fracture nor dislocation, but the limbs were paralyzed—he could not support his head—skin insensible—severe pain in the lower part of the back of the neck, without any external wound—priapism, and frequent desire to make water. The patient stated that, at the moment when he made the plunge he recollected that the water was shallow, and suddenly drew his head back to avoid dashing it against the ground, and that at this instant he lost all consciousness. Delirium came on, and in the night the man died.

Dissection.—" The meninges were of a deep red, and the vessels of the brain itself injected. There was sanguineous effusion around the vertebral column; the spinal canal, *without* the dura mater, which was sound, was full of blood, and, finally, the body of the fifth cervical vertebra was fractured transversely, a little below its middle, so that the two plates of this bone were separated from the lateral masses."—*Archives Générales, March*, 1827.

19. *Injurious effects produced in Children by Protracted Suckling.* By Edward Morton, M. B. L. M.—Dr. Morton is of opinion—"1st. That if children are suckled for an undue length of time, (any period beyond nine or ten months,) they will be liable to be affected, in consequence, with inflammation of the brain." "2nd. That the same effect will take place in infants if suckled by women who have been delivered an undue length of time, although the infants themselves may not have been at the breast for too long a period." "3d. That, if they should not become affected with the disorder in question, during, or soon after the time they are thus improperly suckled, they will nevertheless acquire thereby a predisposition to cephalic disease at some future period of their lives." "4th. That children who are suckled for an undue length of time, when labouring under other diseases, will be much more liable to have the head secondarily affected than other children."—*Lond. Med. and Phys. Journ. August*, 1827.

20. *On Sanguineous Tumours of an Equivocal character, which appear to be Aneurisms of the Arteries of Bones.* By M. Breschet.—These M. Breschet thinks have been confounded by writers, with osteo-sarcoma, fungus hæmatodes, inflammation of the veins of bones and of the bones themselves, &c. The disese generally arises spontaneously, sometimes follows blows or other external violence, occasionally succeeds gouty or rheumatic affections of the knee. It is usually situated at the posterior part of the leg, below the knee, and affects the tibia or fibula, or both; sometimes the disease occupies the metatarsal bones of

the foot. The tumour is painful, and the veins of the whole limb swollen, distended, and varicose. There is deep-seated pulsation synchronous with that of the arteries, this pulsation ceases on the artery, between the heart and tumour, being compressed. On pressing with the finger upon some parts of the tumour, a sound resembling the breaking of an egg may be heard. On dissection, the cellular tissue of the bones has always been found in great part or wholly destroyed—the cavity of the bone enlarged, filled with coagulated blood disposed in concentric layers, as in old aneurismal tumours, and these clots form one or several foci, each communicating with an arterial branch. The external table of the bone still remains, but thinner than natural---destroyed in several of its parts, and offering but feeble resistance, in comparison with a cartilaginous surface which yields to the finger, but quickly recovers itself. Sometimes the bone may be crushed easily, like an egg shell. The periosteum and the aponeurotic expansion, are generally thicker and firmer than in the healthy state, and sometimes they pass into a fibro-cartilaginous state. The articulation near the seat of the disease, has always been found healthy, even when it was only separated from the seat of the malady by an expansion of cartilage. Injection has proved that the principal vessels of the limb are healthy through their whole extent; this is not the case, however, with the small arteries which supply the substance of the bone, they are increased in size, and pass from the centre of the bone into the aneurismal sac by several orifices. M. Breschet thinks that this affection may be compared to erectile tissues of soft parts, and that the pulsation in them, which is sufficiently powerful to have led to the comparison between them and aneurisms, properly so called, results from the synchronous movements of dilatation and contraction of all the small arteries which pass from the bony substance to the parts affected. From these partial but simultaneous movements results a continued motion, which has also been frequently observed in erectile tumours of the lips, and of the globe of the eye, &c. That the disease is of an aneurismal character, is proved by the fact that the ligature of the principal trunk arrests the disease. The credit of being the first to detect the nature of this disease, and also of having first indicated the best mode of treatment, is due to Dupuytren. M. Breschet is of opinion that neither topical applications nor compression can be of any service in this affection, the ligature is the proper remedy; the sooner, however, it is applied the greater the chance of success, for the further the disorganization of the osseous tissue has advanced, the greater will be the difficulty of cure, even when the aneurismal character of the complaint is removed by the ligature. When considerable disorganization has taken place, amputation offers the only hope of a cure.—*Répertoire général d'anatomie, &c.*

21. *Aneurisms of the Aorta.*—In the thirteenth vol. of our former series, we published an account, by Dr. Comstock, of a case of aneurism of the aorta, which burst into the intestinal canal; in the *London Medical and Physical Journal,* for August last, are detailed three cases, two of which burst into the pericardium, and the third into the œsophagus. In none of these cases was there any considerable inconvenience till within a short period before death.

Case I.—A Spanish officer, who had previously enjoyed excellent health, and was constantly taking violent exercise without inconvenience, was suddenly attacked, January 17th, 1827, in the morning, with the most excruciating pains darting through his chest, attended with a sense of suffocation, and great difficulty of breathing—pulse 100—bowels costive. Towards the afternoon, and during the whole night, he perspired freely, and all the symptoms gradually left him. Ordered some opening medicine. For two or three subsequent evenings, he had slight exacerbations of fever, attended with a good deal of pain in his stomach and bowels, which were moved with great difficulty. On free evacuations being procured, all these pains left him. On the 20th, pulse intermitted every second beat—slight head-ache and rheumatic pain, shooting from his chest towards the insertion of the pectoral muscles. On the morning of the 23d, much better—spirits excellent—appetite good—stronger than since he was taken ill—intended next day to proceed to join the army. At one o'clock had an attack similar to that on the 17th, violent pain in one spot, a little to the right of the sternum. Fomentations were applied, and æther and laudanum given, without benefit. In about half an hour he became more disturbed, and suddenly fell back on his bed and after three or four gasps expired. On dissection, an aneurism of the aorta, of the size of a pigeon's egg, was found, about three inches beyond the semilunar valves. The artery had burst at the extremity of the sac, into the pericardium; owing, apparently, to a sudden impetus of blood, as there was no appearance of ulceration about the orifice, which was merely a longitudinal fissure, one-fifth of an inch in extent. The internal coat of the artery, at its margin, was smooth, and of a natural appearance. The coats of the vessel where they formed the sac, were not a third of their usual thickness. Specks of ossification were met with in the artery, from its root to its arch. Through the orifice one pound and a half of blood had flowed into the pericardium, which was completely distended. No other appearances discovered.

Case II.—A gentleman was suddenly taken ill under circumstances of peculiar excitement, and expired in a short time. On dissection "the cavity of the pericardium was found distended with blood, which had escaped into it from an opening in a small aneurism, situated at the origin of the aorta, just within the portion of it covered by the pericardium. Another aneurism was found arising from the aorta, very near, but quite externally to the bag of the pericardium. The former aneurism scarcely equalled the size of an almond; the opening from the aorta into it was through a narrow irregular fissure in the inner membrane, of about a quarter of an inch in length, and co-extensive with the slightly elevated margin of a steatomatous deposition, under which there was a passage, in an oblique direction, into the little aneurismal pouch. The bursting of this aneurismal pouch had opened a communication into the cavity of the pericardium, and had caused instantaneous death. The second aneurism was larger and deeper; for it admitted the end of the thumb into the opening from the aorta, and protruded, forming a cul-de-sac of an inch and a half in depth, and of the size of a small walnut.

"These aneurisms had obviously originated from some steatomatous depositions between the inner and fibrous coats of the aorta.

"Though the neighbouring portion of the aorta was thickly studded with similar steatomatous formations, (which so frequently form the matrix for the deposition of particles of bony matter there,) still none of these had acquired the consistence of cartilage, much less the hardness of liminæ of bone. The inner membrane of the aorta, in the spaces between these yellow steatomatous depositions, was red, and highly vascular.

"All the valves of the heart were in a perfectly natural condition. The brain also, and all the other organs, presented their natural appearances."

Case III.—A gardener was attacked, about the middle of April, with pain in the left side of the head, and general uneasiness, which he attributed to taking cold. A few days afterwards he had some difficulty of swallowing, and slight cough, and the former increased till he could not take solid food. Complained of pulsation in his chest, none at any time to be felt. Pain referred to the right side of the sternum, latterly unable to lie on his left side. Pulse 60, not intermitting. Was found dead in his bed, May 26, with blood issuing out of his mouth.

"On examining the body, an aneurism was found arising just below the point of departure of the left subclavian artery, and which had burst into the œsophagus. The stomach was distended with coagulated blood; and the air-tubes of the lungs also contained some, which appeared to have descended through the glottis."

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22. *Rupture of the Aorta, without Aneurism.*—Three cases of this, we believe rare accident, are related in the July number, 1827, of the *London Medical and Physical Journal.*

Case I. A gentleman aged 52 years, stout and large frame, rather full habit, had suffered at different times a good deal of anxiety of mind—was very suddenly attacked, February 16th, while engaged in earnest conversation, with a sharp pain commencing in his chin, and passing rapidly down his neck, in the course of the great vessels, to his chest and back. The next day Mr. Rose was sent for; he found the patient lying on his back, his pulse soft and easily compressed, about 96 or 100—tongue moist—countenance anxious—afraid to turn himself in bed or move. Could easily distend his lungs, but this like every other exertion, was followed by an increase of pain. There was nothing in the previous history of the case to throw light on the nature of his attack. On the 18th was better, ate with appetite, was easy and cheerful. Once or twice he complained of a noise, which he thought proceeded from some persons knocking on the partition between his room and the next, though nothing of the kind could be heard by others—he had also made the same complaint the day before. In the evening he became restless and got up repeatedly from a disposition to tenesmus. Mr. R. at his visit found him in a state of extreme depression, pulse feeble, very irregular and fluttering—cold perspiration on his skin—extremities cold. These symptoms subsided a good deal on some strong port wine negus being administered, and he continued quiet and easy until about 4 o'clock the next morning, February 19th, when the same disposition to tenesmus returned, obliging him to get out of bed two or three times. After being up for a few minutes, the faintness returned, and he shortly afterwards expired. On dissection the semilunar valves at the root of the aorta were found "partially ossified, at that part of their margin which is attached to the sides of the vessel. Beyond these, the whole internal membrane of the artery, as far as its bifurcation, presented an irregular thickened appearance, from numerous, whitish, flattened tubercles, of a steatomatous character, being every where deposited in it. It could be lacerated with the greatest ease. At the arch of the aorta, there was a rent of not less than two inches in length on its concave side, beginning in the ascending portion, and terminating immediately opposite the origin of the left carotid and subclavian. There was no appearance of ulceration at the edges of this rent. An enormous effusion of blood had taken place every where about the vessel."

Case II. A bricklayer fell from a scaffold forty feet high, fractured his cranium, lower jaw, four true ribs on the right side and three on the left. He lived an hour after the accident but in a state of insensibility, with a cold skin and feeble pulse. On examination "the aorta at the concave part of its arch, immediately beyond the origin of the left subclavian, but on the opposite side of the vessel, and where it turns to become descendens, presented a complete rent in its coats, the laceration forming a very oblong aperture, about three-quarters of an inch in length, and one-eighth across at its widest part. The line of laceration was straight, but oblique as regarded the axis of the vessel. The coats of the artery at this point, as well as elsewhere, offered no evidence of previous disease, but appeared perfectly healthy. No injury of the mediastinum could be discovered, and the aperture of the aorta did not seem in any way connected with the fractured extremities of the ribs."

Case III. A sailor jumped out of his hammock, groaned, and expired. He had gone to bed apparently in perfect health, and had been doing his accustomed duty the day before. On dissection "the aorta was found ruptured about an inch from the semilunar valves; this rupture was about half an inch in length. Small particles of calcareous matter were found deposited at the bottom of the mitral valves, and the corpora sesamoidea aurantii seemed to be composed in toto of this substance. The coats of the aorta were perfectly sound, as not the least deposition, either of ossific or calcareous matter, could be detected about the place where the rupture was situated. The abdominal viscera were perfectly healthy."

23. *Small-Pox after Vaccination.*—In the *London Medical and Physical Journal* for August last, some very interesting cases of small-pox after vaccination with remarks by the late T. Chevalier, are given. The cases occurred in a family of nine children who had been vaccinated in their infancy, and whose father suffered severely at an early age from small-pox, "so as to leave ground for an apprehension that the constitutions of his children might be predisposed to its malignancy, if it should happen to invade them." On the 7th of October, while walking, Julia, aged eleven, passed a child who had the small-pox. On the 14th she was attacked with the symptoms which usually precede the variolous eruption, and on the 16th Mr. C. saw her. He found her with an efflorescence of the skin which he did not believe to be small-pox. "There was, however, one point on the right cheek which looked like it; and on the 18th the disease was too well characterized to admit of any doubt as to its nature, though of the mildest character: the efflorescence of the skin, (which, in the uncontrolled state of the disease, I have always observed to prognosticate its most malignant form,) having entirely disappeared. On the 20th, the eruption appeared perfect, but the pustules small; and from that time it declined, without any thing like secondary fever. On the 28th there was slight inflammation and swelling of the right upper eyelid, sufficient to irritate the surface of the eye; but it soon yielded to mild treatment, and she has since continued in perfect health.

"The disease, however, having thus taken place in the family, naturally excited anxiety about the rest of the children, in whom the consequences appeared as follows:

"Edmund, the youngest, aged seven months, who had been successfully vaccinated by two punctures in each arm, and who was not withdrawn from the nursery during the illness of his sisters, had no symptom of the disease whatever.

"Georgiana, aged two years, had been vaccinated in one point in each arm. She had a little feverishness for two nights, which commenced on the 4th of November, but was followed by no eruption, and would in all probability have excited no suspicion of small-pox if it had not already pre-existed in the family.

"Maria, aged six years, was attacked with the constitutional symptoms distinctly on the 2d of November. Only one spot appeared, which was on her upper lip, and she was perfectly well on the 9th.

"Augusta, aged seven years, began to sicken on the 4th. The eruption appeared on the 7th, but it was very slight, and, though she had rather more debility than the rest during its course, it faded away in an equally short time.

"Harriet, aged nine years, was attacked on the 3d. On the 7th, a very slight eruption appeared, the characters of which were scarcely recognizable; and on the 9th she was perfectly well.

"Arthur, aged fourteen, had some symptoms which, being similar to those of an attack of small-pox, excited an expectation that he also would have the disease; but he was well after two days, without any eruption.

"Frederick, aged seventeen, was attacked rather severely on the 2d, with considerable fever. The eruption manifested itself on the following day: it was of the mildest nature. On the 7th, it began to fade, when he felt perfectly relieved, and was well in a few days.

"Caroline, the eldest, had been vaccinated in both arms in her infancy, by one puncture in each, and had suffered from considerable inflammation in both of them during the progress of her inoculation: she, however, escaped every symptom of the small-pox.

"I have not the smallest doubt that if vaccination had not preceded the infection in these cases, the consequence to this interesting family would have been melancholy in the extreme.

"I wish to add to this account, that, having been recently engaged in some rather extensive investigations concerning the structure of the skin, I find that the excretory ducts, (of which there are very many millions on the surface of the body, serving different and important offices,) are for the most part obliterated in the foveæ, or pits, left by severe small-pox. So that a most serious change must suddenly and unavoidably occur in some of the most important functions in the animal economy; especially when the disease occurs, as it usually does, in the progress of growth, when nothing can be more essential than the integrity of the circulation of the blood on the surface of the body, and the perfection of those operations which are dependent thereupon. Hence we may account, in a great degree, for the excitement of those diseases of glands, of the eyes and eyelids, of the bones, and of other organs, which small-pox is so frequently seen to induce; and, although the balance may in time be restored in many instances, by the gradually increased determination to so much of the skin as remains uninjured, yet the alteration, so long as it operates, must be both injurious and perilous.

"A remedy, therefore, like vaccination, which in almost every case, if not in every case in which it has been properly performed, prevents the secondary fever, the ulceration, or gangrene, and the consequent pits, from occurring in small-pox, (even if it fail to exempt the constitution altogether from the disease,) although it had no other advantage, would be of incalculable value to society, and indisputably of the highest advantage to every individual upon whom it is bestowed."

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24. *Asthma.*—M. **Broussais** considers most cases of this disease as depending on some obstacle to the course of the blood; and that this obstacle is most commonly a disease of the heart. This is not, however, always the case. A determination of blood, however induced, to the mucous membrane of the lungs in a sanguineous subject, will often give rise to a paroxysm of asthma. M. Broussais has known inflammation and irritation in the mucous membrane of the stomach and bowels induce a fit of what is called spasmodic asthma. He considers the distinction drawn between dry and humid asthma as absurd. Every asthma is dry at the commencement of the paroxysm and the mucous membrane ultimately throws out a secretion which relieves the vessels of the lungs. In all cases, however, of asthma, M. B. avers that there is a congestion of blood in the vessels of the lining membrane of the bronchia and air cells, and that this should be looked upon as the proximate or immediate cause of the phenomena, and treated accordingly.—*Journal de la Méd. Physiol. January*, 1827.

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25. *Seat of Cancer.*—M. **Cruveillier**, in a short paper in the *Nouveau Bibliothéque Médicale* for January, 1827, asserts that the immediate seat of cancer is the fibro-cellular tissue. He founds this assertion upon examinations of the disease in the small intestines, stomach, and mammæ, and says that the opinion is strengthened by the fact, that the organs of the body are liable to cancer in proportion to the abundance of fibro-cellular tissue that enters into their composition.

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26. *Urethritis.*—M. **Chapeau** has read to the Society of Medicine of Lyons some observations on urethritis concomitant with rheumatic pains, and produced by the same causes. This coincidence has already been noticed in Vol. XIII. p. 216, of our preceding series, and it is we believe, not an uncommon occurrence, though much overlooked by practitioners, many of whom consider every inflammation of the urethra as produced by impure connection.

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27. *Periodical apyrectic diseases.*—Professor **Fulei** of Catania, Sicily, has published in the *Bibliothéque Médicale* for March, 1827, five very curious and interesting cases of this nature. The first is a case of intermittent inflammation of the urethra. A law student after an impure connexion, was attacked with a gonorrhœa which ceased the second day, returned on the third, continued twenty-four hours, and again ceased. On the fifth day, at the same hour as before, the disease assumed the quartan type, in which form it made two attacks, and then ceased altogether.

The second case is an intermittent cervico-brachial neuralgia, the paroxysms of which came on twice in the twenty-four hours, at 11 A. M. and 10 P. M.

The third was a case of intermittent mental aleniation, which assumed a regular tertian type.

The fourth a very curious periodical ascites, which commenced immediately after each menstruation, and continued to increase till the next period, when it entirely subsided.

The fifth an anomalous intermittent neurosis.

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28. *Destruction of Articulating Cartilages.*—"Under the title of 'Usure des Cartilages Articulaires,' M. Cruveilheir has described a severe complaint of the joints, which is often confounded with gout, rheumatism, white swelling, &c. and treated by means which are useless, if not injurious. This destruction, erosion, or wearing away of the cartilages, is one of the worst effects of inflammation of the synovial membrane of the joints. This effect continues after its cause has ceased to operate; and then the patient experiences a peculiar rigidity of the articulation, with a feeling, and even a hearing of cracking in the joint, on taking exercise, together with pain, of greater or less severity. This crepitus, this rigidity, these pains are particularly felt when the patient first gets up in the morning, and begins to move the joint. Our author has known cases of this kind treated, for a long period, with leeches, blisters, setons, &c. all of which failed—and even amputation had been proposed in some cases.

"M. Cruveilheir attended a lady who, after a severe labour, was seized with articular rheumatism, which travelled successively over all the joints. The pains at length diminished, but did not entirely subside. The patient, without experiencing any new attack of rheumatism, perceived her knee-joints to be gradually getting stiff and painful; and she could feel and hear a crepitus whenever she attempted to walk, or even to turn herself in bed. Soon after this, the hip-joints, the shoulders, the elbows, wrists, and even the metacarpal joints were affected in the same way. Various means were used, without effect, and a surgeon had placed extensive moxas on each side of one of her knees, which penetrated to the fibrous tissues, and produced a copious suppuration that continued some considerable time. The patient thought herself relieved, and consented to a similar application to the other knee. But after three months' sufferings in this way, the joints were found by our author as stiff as ever, and also as painful as before. The constitution had now suffered much from the local irritation. Daily motion was now tried; but this augmented the disease in all respects. He found himself on the wrong track, and quickly abandoned this plan. For a long time he hoped that anchylosis would put a period to this lady's sufferings; but in this expectation he was disappointed. One day, on accurate examination, he found that the joints on being moved conveyed to the ear and hand of the surgeon the crepitus above described. M. Cruveilheir then immediately recognized the nature of the malady as obliteration of the cartilages. For this state, there is no known remedy; but as M. C. conceives that it is the result of inflammation of the synovial membrane, the means of arresting the progress of the disease, consist of course, in rest, and in checking the phlogosis of the said membrane. Two very illustrative dissections are given of this obliteration of the cartilages. In one, the disease only affected the knee-joint—in the other, the hip-joint, the elbow, and the articulation of the lower jaw were the seat of the lesion."—*Medico-Chirurgical Review, July,* 1827, *from the Bibliothéque Méd. Jan.* 1827.

MATERIA MEDICA.

29. *Hydrocyanic Acid.*—Dr. Schneider has employed this acid as an external application to herpetic eruptions, and with signal advantage, even in cases of long standing, and which had resisted the usual remedies. He uses a drachm and a half of the acid, mixed with six ounces of alcohol, and sometimes to prevent too much irritation, adds six ounces of rose water.—*Rust's Magazine*, 21 *B.*, *S.* 569.

30. *Atropia and Hyosciamine.*—A German physician, Dr. Kopp, recommends the injection of a solution of atropia into the rectum to facilitate the operation for fistula in ano, and to relieve also the spasmodic contractions of that intestine. He thinks also, that we may dilate the neck of the uterus in difficult parturitions by this remedy. As an internal remedy, he thinks the hyosciamine much preferable to any of the preparations of opium, as it has not the disadvantage of irritating mucous surfaces.—*Annales de la Médecine Physiologique, June*, 1827.

31. *Nitro-Muriatic Acid Baths.*—Dr. Bernhard of Leipzig, has used these baths with advantage in chronic engorgements of the liver, and the diseases arising from it, as icterus, ascites, hydrothorax, &c. and in herpes, secondary syphilis, &c.—*Bulletin des Sciences Médicales.*

32. *Belladonna in Scarlatina.*—In the last volume of the *Philadelphia Journal of the Med. and Phys. Sc.* will be found some observations which are highly favourable to the efficacy of the belladonna as a preservative against scarlatina. Dr. Lehman has published, in the twenty-second volume of *Rust's Magazine*, a memoir, in which he observes that an epidemic scarlatina prevailed at Torgau, in 1825, of so violent a character that one in eight of those afflicted with it died, and that thirty patients, all of tender age, fell victims to it. The belladonna was administered, with confidence, in many families, in which the disease appeared, and there could be no doubt of the good quality of the extract employed, nevertheless it did not act either as a preservative, nor did it mitigate the violence of the disease. Dr. L. did not perceive any difference either in the violence of the disease, or its results, when it attacked those who had taken the belladonna, even for a long time and in large doses, and those who had never taken the medicine.

33. *Alcoholic Extract of Nux Vomica in Rheumatic Paralysis, and in the incontinence of Urine in Children.*—"A young man, an amanuensis, was suddenly attacked with difficulty in moving the right arm, and presently also with pain. When M. Mauricet, his physician, first saw him ten days afterwards, the shoulder and arm were very tender and swollen, and the forearm was always kept in a half-bent position, and in a state of pronation. Anodyne embrocations removed the pain in the course of eight days; but the patient could not execute the movements of the shoulder-joint at all. Half a grain of the alcoholic extract of nux vomica was then given twice a day in the form of pill. The movements of the joint soon afterwards gradually returned. At first they were involuntary and limited in extent; but by and bye they became much more free, and the patient acquired the command of them. After sixteen days of this treatment, during which the pills were increased to four daily, the joint was restored completely to its natural state.

"Two boys, one thirteen, the other fourteen years of age, had been liable from their infancy to nocturnal incontinence of urine. M. Mauricet, who was consulted by their father, resolved to try the effect of the extract of nux vomica, and gave each of them half a grain night and morning. In three days the incontinence disappeared, and it did not return so long as the remedy was taken. In fifteen days the remedy was discontinued, but the malady returned soon afterwards. The nux vomica was resumed, and with the same success. It was again omitted, and the complaint again returned. At last the extract being again resumed, and taken without intermission for a month, the children were radically cured."—*Ed. Med. and Surg. Journ. July*, 1827, *from Archives Générales de Médecine, Mars.* 1827.

34. *Action of Belladonna on the Pupil.*—"Some discrepancy having manifested itself on the extent of this action, from the different results of experiments in different hands, the conclusion seems to be deducible, that where the quantity of the belladonna employed is small, the dilatation is confined to one eye. M. **Ehlers**, on wakening in the morning, inserted in one of his eyes a portion of the extract not larger than the seed of a millet, and the consequence was, that the pupil of that eye only, (the other retaining its natural state,) continued greatly dilated for ninety-three hours, during which he could see with it perfectly well. If the quantity employed is considerable, both eyes are affected in the same manner; but the dilatation continues in the one to which the belladonna has been applied long after it ceases in the other. It may be added, that the effects of the drug are energetic and durable, in proportion to the quantity; and that it acts with greater readiness, but less duration when the subject is young."—*Lond. Med. Rep. August*, 1827, *from Archives Générales, for May.*

35. *Camphor in Rheumatism.*—M. **Amable Cheze** has communicated to the Medical Society of Lyons, many cases of acute rheumatism cured by general fumigation with camphor; he assists the profuse perspiration which it induces by appropriate means.—*Ann. de la Méd. Phys. April*, 1827, *from the Compte Rendu, par J. M. Pichard, D. M.*

36. *Pomegranate as a remedy for Teniæ.*—D. **Antonio Bigti**, of Pisa, in a paper in the *Nuovo Giornale di Letterati*, details his experience with the pomegranate, (punica granatum,) as a remedy against teniæ: he observes that it is the most certain and efficacious remedy he has found, but that much depends on the mode of preparing it. The part used is the bark of the root, this is most powerful and prompt in its operation in a fresh state, he details a case in which he gave a decoction of ℥i. of the fresh root in a pint and a half of water boiled down to one-half, to be taken in two doses at an hour's interval—in ten minutes after the last dose the patient passed a worm. He gives the following directions for its use drawn from a great number of trials.—The patient should take a dose of opening medicine the day before the decoction is taken—the bark should be taken from the roots of young plants—of the fresh root the dose is as given above: when dried, ten drachms are to be infused in cold water for twenty-four hours, and then boiled away one-half, this decoction is to be given in three doses—one every hour.

PRACTICE OF MEDICINE.

37. *Bleeding in the cold stage of Intermittent Fever.*—In the *Edinburgh Medical and Surgical Journal*, for April, 1827, there is an interesting paper, by Dr. **Mackintosh** on this subject. Believing, correctly, that the difficulty of breathing, the tremors, the pain in the head, the coma, and other symptoms of the cold stage, are owing to congestions of blood in the brain, lungs, liver, spleen, and other internal organs, Dr. M. determined to try the effects of blood-letting, and he had the boldness to practice it first on himself, in 1810, when harassed with an ague which resisted the usual remedies. Before twelve ounces of blood were drawn, the rigors ceased, with all their unpleasant concomitants—there was no hot or sweating state—a pleasant sense of heat succeeded the painful one of cold, and instead of weakness, he felt stronger.

He subsequently tried it on a number of other individuals, and with a similar result. He asserts, "that blood-letting in the cold stage, in every case in which it has been yet tried, has cut short the cold fits, and has prevented the subsequent stages of the paroxysm, so that the hot and sweating stages are saved. It seems to operate by anticipating the natural efforts of the constitution, removing the internal congestion, and restoring the lost balance of the circulating system." "I have seen," says he, "men in the most severe sufferings relieved, after the abstraction of six, eight, and ten ounces of blood. I have known three ounces suffice; and, on one or two occasions only, I had to bleed to the extent of two pounds. The relief, which is the most perfect relief that can well be conceived, is so sudden, when a good orifice can be made, that it has surprised and delighted every one who has seen my practice." Eight cases are detailed by Dr. M. to illustrate the above mode of treatment.

In a paper published in the *London Medical and Physical Journal* for July, 1827, Dr. Ridgway has adduced several interesting observations, in favour of the treatment recommended by Dr. Mackintosh. In 1810, having lost three or four patients successively in the cold stage of intermittent fever, and led by a similar train of reasoning to that adopted by Dr. Mackintosh, Dr. Ridgway determined to anticipate the paroxysm, and to detract so much blood from the venous system as might be sufficient to meet the effect of the approaching concentration. From the period this practice was adopted no fatal case occurred from congestion, and it became his established mode of treatment.

"Early in the year 1813, while the army was yet in winter quarters on the frontier of Spain, a soldier was received into the regimental hospital of the third battalion Rifle Brigade, who was first seen in the second paroxysm of a tertian intermittent, so fully formed as to afford no hope of its interruption. According to custom, the period of accession was marked, for the purpose of noting the time at which blood-letting was to be performed, so that it might immediately precede the following paroxysm. About an hour, then, as near as could be calculated, before this was expected to show itself, I presented myself at the hospital, but found that the paroxysm had anticipated its former period considerably, and that the cold stage was now distinctly formed. Disappointed at this, and anxious to save the man from a third paroxysm, as violent in all probability as the former, I determined to proceed, regardless of this unexpected obstacle, and took from his arm about twelve ounces of blood. To my utter astonishment, the cold, and other stages of the paroxysm, glided away imperceptibly, the disease was gone; and, after awaiting the next period of accession, the soldier returned to his duty, and never after made his appearance at the hospital."

Having thus been forced by circumstances to employ blood-letting in the cold stage of a paroxysm of intermittent fever, and the success being complete, Dr. R. felt quite satisfied of its safety and efficacy, and he says, "had I deemed it necessary in any future instance, I should have had no hesitation in resorting to it."

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38. *Diseases of the Skin.*—Drs. **Graves** and **Stokes** have published in the fourth volume of the *Dublin Hospital Reports,* some highly interesting observations on the efficacy of the physiological treatment of cutaneous diseases. We hope in our next, or in the subsequent number, to present some cases successfully treated upon this plan, by our coadjutor, Dr. Jackson; at present, as the treatment of these diseases in this country, is very generally empirical, we shall give a full analysis of the observations of Drs. Graves and Stokes.

Case 1.—A young girl was admitted 25th October last into the Meath Hospital, labouring under the severest form of psoriasis, affecting not only the scalp, face, and extremities, but almost the whole surface of the body. A most abundant desquamation of silvery white scales was constantly taking place—skin almost universally of a bright red colour and very itchy—pulse 100, strong—complained of thirst, but had good appetite, and in other respects appeared healthy. By bleeding twice, low diet, the repeated application of leeches to the most inflamed parts of the surface, and the use of a pint of the decoction of sarsaparilla with two drachms of super-tartrate of potash daily, the cutaneous inflammation was subdued; recourse was then had to the use of sulphur internally, and warm baths containing sulphuret of potash. For some time the disease seemed to diminish under this treatment, but it afterwards appeared stationary. Recourse was then had to tar ointment, and afterwards to a mixture of tar and citrine ointments. "The parts to which the ointment was applied were well cleansed every day, either by means of diligent washing with soap and water, or with water containing a solution of caustic potash, as directed by Dr. Duffin. The warm baths and the internal use of sulphur have been continued; she uses a diet consisting chiefly of bread and milk, and is now almost completely well."

"In squamous diseases, more limited in their extent, we have successfully used a similar method of treatment; except that in such cases general blood-letting may be often dispensed with, as the repeated application of leeches to the affected parts is sufficient to subdue the active inflammatory stage of the disease. The only difficulty which occurs in the treatment of squamous diseases, is to determine the proper period for leaving off the local antiphlogistic applications, and changing them for stimulants. The latter, if applied too soon, will aggravate the disease, and when this is found to be the case, they should immediately be laid aside, and the application of leeches, poultices and cooling lotions be again resorted to."

As yet Drs. G. and S. have met with no case of scaly disease which has resisted the above method of cure.

Drs. G. and S. have also employed this treatment in chronic pustular and tubercular diseases.

Case.—"*John Knowlan*, aged 16, was admitted into the hospital early in December, 1825, covered with the most aggravated form of general porriginous eruption. The head, face, elbows, hands and wrists, were particularly affected; on the hands there was the most enormous accumulation of scabs, arising from the discharge of numerous pustules. The nails were thickened, contorted and split. A continual steam arose from his arms and hands, and the odour of the body was most disgusting. Indeed it would be difficult to convey in words a proper idea of his loathsome appearance. The eruption chiefly affected his scalp, face, and extremities; on the trunk there were but few pustules. The skin of the trunk was however red, rough with papulæ, and the cuticle fell off constantly in dry scales. The skin of the extremities was red and hot. He had occasional rigors and constant thirst, but was not emaciated. Under these circumstances it was determined to treat him on the antiphlogistic plan. He was, in consequence, bled twice to a considerable amount, freely purged, and used several warm baths; by those means he was greatly improved, the skin of the body had lost much of its inflammatory redness, but the hands were still loaded with the dried scabs, red, and constantly exhaling a dense vapour. They were leeched, and warm poultices applied over the recent leech bites. He continued using the warm bath, and took an electuary of the super-tartrate of potash, with sulphur. In the course of a week the bleeding and leeching were again repeated with great benefit; so much indeed had the inflammatory symptoms subsided, that it was thought adviseable to order him small doses of the arsenial solution. Under this plan he continued for some time, but the symptoms not yielding, this medicine was omitted, and he took the infusion of dulcamara without any perceptible benefit. The antiphlogistic plan was then recurred to, the head was shaved and poulticed, he was freely purged, and took several tepid baths; by this treatment every inflammatory symptom subsided, the head become clean, and the skin lost its red colour, but was still covered with small white scales in such abundance, that when he took off his shirt, a cloud of them would rise around him. The hands were still covered with thick scabs, but had lost their inflammatory appearance. The pulse was slow, and the bowels freely open. The phlogistic diathesis being thus somewhat subdued, he used the sulphur bath, and an ointment consisting of equal parts of the dilute citrine and tar ointments was applied to the hands and head, with the greatest benefit; the scabs fell off, and a fine new cuticle covered the palms of the hands. Thus he continued for about ten days, during which time he had been put on a more generous diet. He now experienced a return of the eruption over the whole body, especially on the breast; it came out in the form of minute pustules, which quickly dried, leaving the surface covered by thin scabs. The skin was hot and red, and the pulse indicated great activity in the circulation. He was ordered to be bled, and was again freely purged. The *blood was buffed and cupped.* Great relief followed this operation. The skin lost its red colour and itchiness, and the pulse was reduced in strength and frequency. He was ordered to take no animal food. The baths were repeated, and his bowels kept freely open by the electuary of cream of tartar and sulphur. Under this treatment he rapidly improved, and after some time was even enabled to recur to the use of the tar and citrine ointments, which together with warm baths, completed the cure in a few weeks. He is at present, (December 15, 1826,) in good health, and quite free from the least trace of cutaneous eruption."

Drs. G. and S. have found a similar treatment efficacious in a case of sycosis menti, and have also used it with very marked success in porrigo of the scalp, or scald head. "Recent cases of porrigo yield readily to the application of leeches to the head, and poultices, repeated until the inflammation of the scalp is subdued." The formation of these pustules, be the case chronic or recent, are the result of inflammation, and their development will cease, with the removal of their cause; the cure may then be easily completed by the judicious use of the tar and citrine ointments. The first step, of course, in the treatment of all cases of porrigo, "must be cutting the hair, and the diligent use of emollient poultices, alkaline lotions, &c. until the scabs are softened and removed, after which the head should be shaved. Even in cases of long standing, we have found the greatest benefit to arise from leeching the head, and now almost always commence the treatment in this way. Recent cases however require a more frequent repetition of the leeches, and a stricter antiphlogistic general treatment than chronic cases. In several cases of scald head, where circumstances prevented us having recourse to leeches in the first instance, we have substituted, with advantage, poultices, with an ounce or two of liquor acet. Plumbi. In children this will often succeed in reducing the high inflammatory action. In one case only did the continued use of the acetate of lead produce symptoms like the colica pictonum."

The constitutional treatment must vary with the patient's peculiarities as to health. "In strong healthy children cooling aperients and a spare regimen will much facilitate the cure. In the weakly and emaciated, change of air, attention to the bowels, a more nutritious diet, and a judicious use of tonic remedies, may be combined advantageously with the local antiphlogistic plan, and in such the cure of the cutaneous complaint, by removing a constant source of irritation, will materially tend to restore the health.

"There is no doubt that the sudden drying up of cutaneous diseases has occasionally produced dangerous internal complaints. This danger does not seem to attend their cure by the antiphlogistic treatment, which, when prudently conducted, *diminishes the tendency to inflammatory action in the constitution, and does not, like merely local applications, destroy it in one part only to re-appear in another.*"

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39. *Colica Pictonum.*—Two cases treated by Dr. Graves yielded very readily to strong tobacco stupes applied to the abdomen, followed up by cathartic pills, containing croton oil, the operation of which were promoted by a purgative injection.—*Dublin Hospital Reports, Vol. IV.*

40. *Paralysis after Colica Pictonum.*—A case treated by Dr. Graves received great benefit from the use of strychnine, as recommended by Magendie.—*Ibid.*

41. *Treatment of Sloughing Ulceration of the Mouth, produced by Mercury.*—Drs. Graves and Stokes record two cases of salivation and death produced in children by small doses of calomel. The inefficacy of the ordinary remedies, determined Drs. G. and S. to proceed, should another case occur, on other principles. A girl to whose head half an ounce of mercurial ointment was applied, had her mouth on the subsequent day affected, and before three days had elapsed, the inflammation about the jaws, face, and mouth, had made such formidable progress as to threaten the life of the patient. Viewing the sloughing ulcerations as a consequence of previous excessive inflammation of the parts, Drs. G. and S. attempted to prevent their formation by moderating the inflammation. This was accomplished by frequently repeated applications of leeches to the most swollen parts. The bleeding from the leech bites was encouraged by emollient poultices; none of the stimulating gargles, usually so injudiciously recommended in excessive salivation, were allowed; the antiphlogistic regimen was enjoined, and the patient recovered. The above case offers a very happy illustration of the influence of the physiological plan of treatment.—*Ibid.*

42. *Treatment of Drowning and other Varieties of Asphyxia.*—"Some experiments and observations of considerable importance have lately been made at Paris on the circumstances which modify the effects of two of the chief remedies for asphyxia—namely, insufflation of the lungs, and galvanism. The author, M. Leroy d'Etoiles, has succeeded in throwing some light on the variable results which have been procured by these modes of treatment by almost every person who has employed them.

"With regard to Artificial Respiration, he has found that it requires much more cautious management than is generally believed; for if the air be blown into the lungs with too great force, they become unfit for their function. This he says he has found by repeated experiments on rabbits, dogs, and sheep. The following results were procured with the sheep, an animal whose lungs approach nearest in point of volume to those of man. An incision being made into the windpipe, and a silver tube secured in it by a ligature, a single forcible inspiration was made through the tube with the mouth, and the tube and ligature were immediately withdrawn. In the course of a single minute the animal became agitated and restless, made forcible efforts to inspire and expire, was then seized with convulsions, became motionless and senseless, and the pulse ceased in three or five minutes. If the carotid artery was opened during these symptoms, the arterial blood was observed to become rapidly more and more dark and venous. These phenomena were remarked in four successive experiments. In other three made with the same animal under the same circumstances, except that the insufflation was performed less rapidly, the breathing was not arrested so suddenly, but became at first embarrassed, and gradually more and more so, till at length death took place in about fifteen minutes from the beginning of the experiment. The symptoms under which these animals died, clearly indicated death by asphyxia, and the appearances in the dead body were conformable. The cause of the production of asphyxia under forcible insufflation is not very apparent; at least M. Leroy has not hitherto succeeded in throwing any light upon it. In the second variety of cases, the air-cells of the lungs were probably ruptured, and a communication between them and the cavity of the chest even established through the pleura, for the lungs could not be dilated after death. But in the first variety, in which death took place immediately, the same injury was not produced. The practical conclusion, however, to be drawn from his experiments is manifest and important—namely, that in performing artificial insufflation, the bellows ought never to be worked forcibly; and we may add another reason for cautious management of them—that the operator is not perhaps, always aware how great the force is which he employs in working them. With the bellows a far greater force is easily put forth, than can ever be employed with the mouth, which was M. Leroy's instrument. If M. Leroy, however, is correct in considering the forcible expansion of the lungs as the cause of death in his experiments, the objection which applies to the forcible use of the bellows in the human subject, does not apply so pointedly to forcible insufflation with the mouth; because the operator subjects his own lungs to the same pressure as those of his patient, so that his own lungs will enact in a manner the part of a safety-valve, provided he is not superior in strength of chest to his patient.

"The other topic which forms the subject of M. Leroy's remarks, is the application of Galvanism to the treatment of asphyxia. It is well known, that although this remedy has been sometimes found singularly useful, it has very often failed and not unfrequently it has even appeared to do harm. M. Leroy thinks he has discovered the cause of its failure. When the galvanic current is applied in such a way as to affect the diaphragm, it is most always applied continuously, in which case the contractions are irregular, and do not constitute a natural inspiration. But if the current is suspended as soon as the muscular contraction begins, then a complete inspiration is produced, and the regularity of the subsequent expiration is not interrupted: on connecting the galvanic circle, a new contraction is produced, which in like manner causes a natural inspiration, if the circle is again interrupted. The plan recommended by M. Leroy, and adopted in his experiments, is to insert a fine acupuncture needle between the 8th and 9th ribs, till it reaches the attachments of the diaphragm, for which purpose a length of a few lines is sufficient—and then alternately to complete and interrupt the galvanic circle, by touching the needle with one conductor at the proper intervals, while the other is kept permanently in the mouth."—*Ed. Med. and Surg. Journ. July,* 1827, *from Archives Génerales de Médecine, Nov.* 1826.

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43. *On the Treatment of Poisoned Wounds by Ligatures round the Limb.*—"M. **Bouillaud** has made some farther experiments on this subject: and they tend to confirm what is now pretty well established, that a ligature applied between the heart and a wound into which a poison has been introduced, will prevent or suspend its deleterious effects. His experiments were made with strychnia. The only novelties in them are the proof that it may be applied to the extremity of a divided nerve, without any of its usual effects ensuing—and a much more important result, namely, that by alternately relaxing and tightening the ligature at proper intervals, an animal, into which a fatal dose has been introduced may be alternately affected and relieved, till the whole poison has been absorbed, and has exhausted its energy. The author does not seem to have been aware of this practical application of the facts he observed. It is evident, that with regard to such poisons as opium, strychnia, and hydrocyanic acid, the system possesses the power either of discharging or decomposing them. Hence even after they are beyond the reach of direct extraction, their effects may still be controlled by art, if the physician can succeed in admitting them into the circulating system by little and little; for each successive portion is decomposed, and the poison has not an opportunity to accumulate in the blood to a sufficient extent to prove fatal. These views result from the experiments of M. Bouillaud, now mentioned, and likewise from those of Dr. Barry on the effects of dry cupping, when applied to wounds poisoned with the active vegetable poisons."—*Ed. Med. and Surg. Journ. July,* 1827, *from Archives Génerales de Médecine, Nov.* 1826.

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44. *Ascites Treated by Graduated Pressure.*—"A woman who had been affected for several months with ascites, was received into the clinical establishment at Parma, under the care of Professor **Speranza**. The ascites was the result of chronic puerperal peritonitis: the patient had been debilitated by a

prolonged lactation, and was already hectic. Digestion was badly performed, the urine was scanty and turbid, and the abdomen tense. Purgatives, combined with squills, mercurials, drastic medicines, &c. had been employed without any good effect. Professor Speranza being unwilling to have recourse to paracentesis, determined to try the effect of compression of the abdomen; and employed the bandage recommended by Monro. From the time when this was commenced the urine began to flow, and became very abundant; more than fifteen pounds being passed in a day. In the course of seven weeks the abdomen was reduced to its natural size, and presented no sign of effusion. Professor Speranza then treated the case with sulphate of iron, squills, decoction of lichen mixed with milk, and a nourishing diet, without, however, discontinuing the pressure of the abdomen. The fever soon decreased, digestion improved, the woman regained her strength, and went out of the hospital in good health, which she yet continues to enjoy."—*Lond. Med. Rep. July,* 1827, *from Annali Universali di Medicina.*

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45. *Idiopathic Glossitis.*—Dr. Graves relates in the fourth volume of the *Dublin Hospital Reports,* the case of a medical student, who was attacked with severe febrile symptoms, ushered in by violent rigors, great pain in the neck, and occiput. The left half of the tongue then became very tender and painful—gradually increased in size, and when Dr. G. first visited the patient, was so enormously swollen as nearly to fill the mouth, which could scarcely be closed on account of the protrusion of the tongue. The right half of the tongue was perfectly natural, and its comparatively diminutive size formed a striking contrast with that of the left, the median line forming a perfect boundary between the swollen and the healthy parts. Part of the tongue appeared on the verge of gangrene, but two or three applications of six leeches at a time to the inflamed part produced a speedy decrease of the tumour and inflammation, but the left half of the tongue, after a lapse of two years, is still perceptibly increased in size. Idiopathic glossitis is a rare disease, a few cases only being recorded, and in none of these was the inflammation confined to one-half of the tongue, nor in any of them was leeches applied to the affected part. Dr. Gottel applied leeches under the tongue, and pushed actively the antiphlogistic treatment; the same was done by Dr. Maillier. In addition to these remedies, Dr. Olivet used local detractions of blood from the tongue, at first by means of incisions in the dorsum of the tongue, and afterwards by opening the sublingual veins. Dr. Graves considers the application of leeches as preferable to either, in this opinion we fully agree with him.

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46. *Chronic Diarrhœa.*—" There are many forms of this disease evidently dependent on ulceration or other organic lesion of the mucous membrane of the bowels, the consequence, or at least the sequence of dysentery. But there are some other cases of obstinate diarrhœa, where the disease goes on for years, and where dissection, after all, detects no organic change in the intestines. Dr. Baillie has described 'a particular species of purging,' which is but little known, and has generally proved fatal. The alvine discharges resemble a mixture of lime and water, with froth on the surface. It most commonly occurs in people who have resided in warm climates, and suffered from hepatic affections; but not exclusively in this class. When the disease is in a mild form, the evacuations are of the consistence of pudding, and of a pale colour. Under such circumstances, and especially if the motions be occasionally figured, the patients may live many years with the complaint. They have usually a sallow countenance—are thin, but not greatly emaciated—have tolerable appetites—white coated tongues. Nothing particular can be detected when the abdomen is examined by the hand. There is no tumour—no pain on pressure—but the bowels are generally distended with air. Dr. Baillie never had an opportunity of examining any patients who died of this disease, and therefore could not speak as to its pathology. But Mr. Wardrop, in a note to his

edition of Dr. Baillie's works, informs us that he, (Mr. W.) had an opportunity of dissecting a patient who had been under Dr. B.'s care for this complaint, and that he found considerable thickening of the coats of the rectum and colon, great contraction of the calibre of the gut, with small, but deep ulcers interspersed over its surface. Dr. Seymour and Mr. Arnot, however, have each had an opportunity of examining the intestinal canal in this complaint; but in these instances, there was no breach of structure or organic alteration of any kind in the large or small intestines.

"We have been induced to notice this subject in consequence of a remedy which has been introduced of late by Dr. Elliotson, at St. Thomas's Hospital—namely, the sulphate of copper, combined with opium. This zealous physician has given the remedy in a considerable number of cases of chronic diarrhœa, where all, or almost all other remedies had failed, and with complete success, in every instance. The dose is generally half a grain twice a day, with half or a grain of opium, increasing the dose to two or three grains in the day, but seldom beyond that quantity. We understand that Dr. E. made experiments with the opium alone, which failed to cure the patients—and the reason why he combined it with the sulphate of copper, was to prevent the latter from causing pain in the stomach and bowels.

"Dr. E. is inclined to view the remedy in respect to its modus operandi, as simply an astringent, but when we reflect on the power which this sulphate possesses of allaying irritability when applied to external sores, we shall be induced to attribute much of its success in these cases, to its action as lessening morbid irritability of the intestinal canal. But as Dr. Elliotson's observations will probably soon be published, we shall defer any farther remarks till that period."—*Medico-Chirurgical Review, July,* 1827.

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47. *Mercurial Frictions in Puerperal Peritonitis.*—M. Velpeau has published in the *Révue Médicale, for Jan.* 1827, a memoir on the use of mercurial frictions in puerperal peritonitis. Having seen forty or fifty patients die, notwithstanding the application of leeches to the abdomen, general depletion, and the other usual modes of treatment, M. V. concluded that the disease when once established, is rarely benefited, but often rendered worse by blood-letting, whether general or local, and he determined to use mercurial frictions, so highly recommended by the surgeon of the public hospital of Antwerp. Accordingly he has employed it in several cases, and he thinks that he is authorized to draw the following conclusions from the facts which he has observed.

"1st. That puerperal peritonitis, once completely established, and abandoned to itself, is almost invariably mortal.

"2d. That it remains yet to be proved that sanguineous depletion *alone* is adequate to the cure of the disease.

"3d. That the writings of Hamilton, Gordon, and Vandenzande incontestibly prove that, by means of calomel, in large doses, many cases of puerperal peritonitis, of the most severe kind, have been saved.

"4th. That mercurial frictions over the abdomen, made at short intervals, promise considerable success, and that this ought to draw the attention of the profession to the said point of practice.

"5th. That, by means of mercurial frictions, patients have been rescued, as it were, from the brink of the grave; and consequently that this remedy should be tried, however late in the disease.

"6th. That the friction should be continued, without fear, until the mouth becomes affected—and, in most cases, for some time after all the symptoms have subsided.

"7th. That it would probably be advantageous to conjoin the internal administration of calomel, warm baths, and warm temperature.

"8th. That the facts observed by the authors, without being sufficiently numerous or conclusive, are yet such as may encourage, authorize, nay compel practitioners to prosecute the inquiry."

M. V. recommends two drachms of the mercurial ointment to be rubbed in on the surface of the abdomen every two or three hours. After two or three frictions, should the symptoms not be ameliorated, he directs the abdomen to be anointed with oil, and washed with soap and water, and the frictions to be renewed. This treatment is to be continued some time after marks of salivation have shown themselves. The patient is to be kept in a temperature considerably elevated, and carefully guarded against cold currents of air.

We should be pleased to know upon what principles M. Velpeau can explain the fact which he asserts, viz. that in the cases he has treated sanguineous depletion totally failed, if it did not occasion actual harm, while the mercurial frictions always mitigated the abdominal pain and tension, and, on more than one occasion, seemed to place the patients out of actual danger. It is true, he gives it as the result of his experience, and after all, experience must decide the value of this mode of treatment. But it should be recollected that experience not unfrequently leads us astray, and when its results are at variance with the conclusions of reason, we should receive its dictates with proper caution.

OPHTHALMOLOGY.

48. *On the Inflammation of the Membrane of the Aqueous Humour.* By Dr. Wedemeyer.—A scrofulous, rheumatic, and arthritic predisposition, contusions of the eye, and inveterate syphilis, Dr. Wedemeyer considers as capable of producing the inflammation in question. The signs which he has observed to characterise it, are, little pain in the eye or external redness; want of transparency of the internal surface of the cornea, at the commencement, although the external surface remains moist and shining; subsequently small opaque spots on the internal surface, and cloudiness of the cornea. The aqueous humour is also cloudy, it is secreted in unusual quantity, and constitutes a true acute dropsy of the anterior chamber; the patient becomes near-sighted, (myoptic,) his sight is much affected; often the march of the disease is very rapid, blood is effused in the anterior chamber, and afterwards pus: sometimes the inflammation extends to the iris, the colour of which part then changes. These symptoms disappear more or less slowly under the influence of an antiphlogistic and revulsive treatment, but collyria and other local means are of little utility.—*Langenbeck: neue Bibliothek für die chirurgie und Ophthalmologie; tom.* 4. *p.* 66.

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49. *Observations on the Inflammation of the Capsule of the Aqueous Humour, Chronic Iritis following the operation of Keratonyxis, &c.* By Dr. G. C. Schindler.—Dr. Schindler relates two cases of inflammation of the serous tunic of the aqueous humour. The diagnosis which he indicates, differs but in a few particulars from that of Dr. Wedemeyer. He asserts that the colour of the iris undergoes no change, but that the pupil closes, and sometimes takes an unnatural figure. The lymph poured out in the anterior chamber form bands uniting the different surfaces, and sometimes produce a false membrane which closes the pupil. The inflammation terminates always by secretion, and never by suppuration; Dr. Schindler thinks that internal sympathetic ophthalmiæ, hitherto considered as appertaining to iritis, have their seat rather in the serous membrane.

In the two cases which he has treated, calomel and the extract of belladonna were of great service, and he considers them as the best means that can be employed to cure the disease.

He considers simple inflammation of the serous capsule of the anterior chamber of the eye, contrary to the opinion of Professor Langenbeck and Dr. Wedemeyer, as different from the inflammation which sometimes follows the operation of keratonyxis, because the latter is more complicated and slower in its progress. Dr. Schindler does not entertain so unfavourable an opinion of keratonyxis as Dr. Wedemeyer and Professor Langenbeck: he has seen only a single instance of inflammatory symptoms succeeding that operation, and in this case a single bleeding relieved it; he advises that the cornea should be punctured more towards its centre than inferior part, because we thus avoid the danger of wounding the iris, the movements of the needle are less extensive, consequently there is less pressure on the lips of the wound, finally because the cicatrice, always trifling, speedily disappears totally.—*Ibid.*

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50. *Deep-seated Inflammation of the Eye.*—Mr. Bury relates in the *Medico-Chirurgical Review*, for July last, an interesting case treated by Mr. Wickham, which shows in a very striking manner the control of mercury over iritic inflammation, and its power of effecting the absorption of the effused lymph.

Case. A woman, æt. 21, corpulent and florid, has had a slow but continued inflammation in the right eye for two years, during which her vision has gradually become more and more indistinct, till, at last, it is lost. No appearance of inflammation of the conjunctiva or sclerotica—pupil immoveably contracted, its edge surrounded with a margin of lymph, of a brownish colour—suffers much from deep-seated pain of the eye-ball. Considering it a case of chronic inflammation of the iris and choroid, and understanding that the usual antiphlogistic treatment had been fully and repeatedly gone through, calomel with opium was at once given, and as soon as the mouth was affected, which was in five days, an evident amendment took place in the vision, and a slight mercurial action being kept up, she by degrees recovered her sight completely. Soon after this the left eye was attacked with deep-seated inflammation, which was treated by a renewed excitement of the mercurial action. These attacks after a time, were again and again renewed, and only yielded to the repetition of the mercurial action. At the close of an attack of inflammation quin. sulp. gr. iij. three times a day were administered, in the hopes of destroying the disposition to a repetition of the attack. Slight attacks of superficial inflammation occurred subsequently, but in the course of three weeks she appeared well.

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51. *On the Artificial and Accidental Evacuation of the Anterior Chamber of the Eye.* By Dr. Basedow, of Mersebourg.—Dr. Basedow considers the evacuation of the anterior chamber of the eye as the dernier resource in cases of ophthalmia, threatening to terminate in suppuration and destroy vision, and he represents it as capable of saving the eye in almost desperate circumstances. He has performed the operation only in four instances, but these were all crowned with success. He divides the cornea at its most dependent part, and makes the incision but one-third the extent required in the operation for cataract. In the cases in which he operated, the aqueous humour flowed with the pus, and the evacuation was repeated, as the chamber became refilled, until the incision healed. The cornea recovered in transparency, a few days after the operation, and the cure was perfect. Dr. B. endeavours to explain the favourable effect which the evacuation of the anterior chamber exercises over the progress of inflammation of the anterior parts of the globe, and cites the cases of disease where the spontaneous or accidental evacuation of the aqueous humour, frequently repeated, is either useful in preserving the organ, or, at least, is without any real danger to vision. Among these are certain scrofulous and rheumatic ophthalmias, with superabundance of aqueous humour, extreme tension of the eye, and ulceration of the cornea, which gives exit to the fluid, and thus relieves the internal compression, and in the second place certain traumatic lesions of the globe, of which the author gives some examples.—*Bulletin des Sc. Med. from Journ. für Chirurg. und Augenheilkunde, t.* viii. *p.* 594.

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52. *Hypopion.*—Dr. Gierl, in a late work on this disease, recommends, if the inflammation does not yield to antiphlogistics, that the matter should be

evacuated, not only when it exists in the anterior, but also when occurring in the posterior chamber of the eye; and in this latter case he proposes to make an opening into the posterior chamber through the sclerotica. Dr. G. has performed this in a single instance only, but with complete success.

We do not believe that this mode of evacuating the pus has any advantages, and cannot advise an imitation of the practice.

SURGERY.

53. *On the Treatment of Tetanus.*—Every means which offers the slightest prospect of affording relief in this truly indomitable disease, is deeply interesting to the profession. Dr. Marsh, in a paper in the *Dublin Hospital Reports*, vol. iv. proposes to treat it by placing the patient, for many successive hours, in a vapour bath of a low temperature; and at the same time to powerfully uphold and support his strength. Dr. M. relates three cases in which this plan was tried. The first was a boy about six years old, in whom the symptoms of tetanus came on gradually, several days after an injury in the great toe. The paroxysms were severe and frequent. Purgatives not acting on the bowels, and opium not mitigating the symptoms, he was placed in a vapour bath, the heat of which was not allowed to rise beyond ninety degrees. He remained in the bath six hours, was purged actively with croton oil, and a liniment of extract of belladonna and oil of amber was very frequently rubbed along the spine. This treatment was persevered in for many successive days, (the bath being employed, uninterruptedly, for four, six, and sometimes eight hours at a time,) and the patient slowly recovered. On removing him from the bath, it was found that the sore, which had been foul and unhealthy, began to improve in appearance.

The second case was a very severe one, it was that of a boy twelve years old; the disease arose from an injury to the ankle joint. The uniform effect of the vapour bath, was to abate the violence of the symptoms, without however, influencing the rigidity of the muscles. The tetanic symptoms, however, disappeared thirty hours before death. The patient died worn out, after a protracted disease.

In the third case, ptyalism, without benefit, having been established, it was resolved to put the man in the vapour bath, which was steadily persevered in for many successive hours, daily, and often during the night, until every symptom of the disease had gradually subsided. In this case Dr. R. says "the severity of the symptoms were remarkably diminished by the bath."

Our views of the pathology of tetanus have led us in two cases, the only ones that have come under our care, to treat them by a different mode. Believing it to be an inflammation of the spinal marrow and its membranes, we treated one case principally by general and topical depletion, the latter being effected by cups along the spine. In the second case we trusted principally to topical depletion; a double row of cups were placed along the whole spinal column, so many of them were scarified as enabled the operator to detract the quantity of blood we thought the patient should lose, and the remainder were kept on an hour. Both cases proved fatal; it is, however, right to add that neither of them were very favourable cases of experiment. The first was a man of extremely nervous temperament, and the second an habitual drunkard. Notwithstanding our want of success, should we be called upon to treat another case, we should be disposed to pursue a similar plan. We would substitute leeches, however, for cups.

In the *Annales de la Médecine Physiologique*, for February, 1827, M. Lasserre has related four cases, all of which were cured. The treatment consisted principally in general, and more especially local depletion along the spine, the epigastrium and the muscles which were the seat of spasm. The second case was one of traumatic tetanus.

M. Broussais, in his remarks on the paper of Dr. Lasserre, ridicules the use of opium in the disease, as it produces, he says, disorders of the stomach and head, which reacts upon the spinal affection. He also abstains from the use of violent purgatives; considering the constipation to be the consequence of the affection of the spinal irritation, and to be remedied by the removal of the cause. He recommmends for that purpose general bleeding, and especially topical depletion, by leeches applied along the spinal column, and upon those muscles to which an excess of nervous influence is directed.

M. Carron reported last year, to the Medical Society of Lyons, five cases of tetanus; three of them were traumatic, two of which, and both the cases of idiopathic tetanus, were cured. They were treated by M. C. by leeches and blood-letting, principally the former. The case that terminated fatally was treated, in the first instance, with opium and musk; M. C. was called in late in the disease, and employed depletion by leeches, but without success. On dissection, the membranes of the spinal marrow were found red and injected; small vessels not visible in a natural state of the parts, were apparent in the spinal marrow, which was reddish, and floated in a great quantity of a colourless serous fluid, particularly in the cauda equinæ; the right portion of the diaphragm was contracted and as hard as parchment, the left part was natural; the mucous membrane of the stomach was of a dull red, and presented here and there small black ecchymosed spots; the solar and semilunar plexuses were of a deep red; all the other organs were in a natural state.

54. *Abscess of the Liver.*—A robust man was admitted into the new Meath Hospital with acute inflammation of the liver, which terminated in abscess. A very distinct feeling of deep-seated softness was soon perceptible to the touch, yet the abscess showed no tendency to point outwards. The external tumour being very diffused, and of course the situation of the abscess quite uncertain, the surgeons of the hospital disapproved of any attempt to open it; but as the man's constitution was rapidly giving way, Dr. Graves proposed that an incision about four inches long should be made exactly over the centre of the tumour, and continued if possible to within one or two lines of the peritoneum, in the hopes that the abscess might finally burst through it. The operation was performed by Mr. Mac Namara, yet the abscess was not felt more distinctly. The wound was plugged at its bottom with lint to keep it open, and two days after, upon the patient's sneezing, a large quantity of pus burst forth through the wound. The matter however came from one side and not from the bottom of the wound, the incision not having been made exactly over the abscess. Dr. Graves thinks that this mode may prove serviceable in similar cases, many of which have hitherto been considered beyond the reach of art.

It has been recommended by Mr. Porter in deep-seated abscesses pressing on the larynx and trachea, (Vide Philadelphia Jour. Med. and Phys. Sc. vol. 14, p. 371,) and we think it will be found useful in many cases of deep-seated abscess.—*Dublin Hospital Reports, Vol. IV.*

55. *Case of ununited Fracture of the Arm, successfully treated by Pressure.* By M. Brodie.—A man aged 24, in Nov. 1825, fractured his right arm, the accident was treated in the usual manner, but bony union did not take place. In August, 1826, a seton was passed between the fractured extremities of the bone. The seton was *withdrawn* at the expiration of *a week*. Some inflammation causing the surrounding soft parts to become consolidated and thickened, must have followed the operation, as it was supposed that a cure had been effected. When the inflammation however subsided, the bones were as loose and moveable as ever.

" On the 29th of November, 1826, the man was admitted into St. George's

Hospital. At this time the broken ends of the bone appeared to be united by ligament, admitting of extensive motion. They rode considerably one over the other, and the limb was somewhat shortened. The following plan of treatment was adopted, founded on a principle suggested by Mr. Amesbury.

The forearm being placed in the half-bent position, a wooden splint, adapted to the half-bent figure of the limb, was applied on the inside extending from the axilla to the fingers; a straight splint was then placed on the outside of the arm, extending from the shoulder to the outer condyle; and these splints were secured by bandages. On the outside of all, a tourniquet was applied, the band of which embraced the limb in the situation of the fracture. By turning the screw, which was on the outside of the arm, additional pressure was made on the fractured bones; and it was easy to regulate the pressure, so that it should be as great as possible without occasioning much distress to the patient. The curved wooden splint in the outside being broader than the limb, and only slightly concave, the principal blood-vessels were defended from pressure, so that, whatever force was employed for the purpose of keeping the fractured ends of the bones in close contact, the circulation of the limb continued nearly uninterrupted.

" This plan having been pursued for about six weeks, it was found that the fractured bones admitted of much less motion than before. At the end of three months, no motion whatever was perceptible; but, by way of security, the use of the apparatus was continued for another month.

" On the 31st of May the man left the hospital, having been for some time allowed the free exercise of the limb, without splints or bandages, the bones being firmly consolidated, and the limb as useful as it was before the accident." —*Lond. Med. and Phys. Journ. July*, 1827.

We are induced to notice the above case for two reasons, 1st, because the mode of treatment resorted to is ingenious and novel, and it may occasionally be useful to resort to it, but we are far from believing that it will succeed when the seton fails—the above case cannot, we think, be cited to the contrary; 2d, because it shows the common cause of failure in the attempts to cure artificial joints by the seton. In these cases long continued inflammation must be kept up, and therefore, Dr. Physick, the author of the practice, directs that the seton should not be withdrawn for four or five months, unless bony union earlier takes place. (Vide Dorsey's Surgery, vol. I. p. 127.) In the first case in which Dr. Physick used the seton *no amendment was perceived for twelve weeks*, but in *five months* the cure *was complete* and the arm as well and strong as it had ever been. Instead, however of keeping the seton in the limb for sixteen or eighteen weeks, it is usually removed in as many days, or even " at the expiration of a week," and it is then announced as a failure!

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56. *Case of Inflammation of the Tongue cured by Incisions.* By Charles Martin, of the Island of Mull.—A stout healthy man aged thirty-five, was attacked in the evening with acute pain in his tongue, at first so circumscribed that it could be covered with the point of the forefinger. The pain was attended with a most distressing sensation of heat, and a feeling as if the tongue was gradually and uniformly enlarging. Violent throbbing of the lingual arteries—restlessness—rather feverish—head-ache—saliva adheres tenaciously to the roof of the mouth and surface of the tongue. The tongue rapidly increased in size, protruded from the mouth, separating the jaws to the extent of half an inch. Between twelve and two o'clock the patient applied to Mr. Martin. At this period the tongue occupied so large a portion of the mouth that Mr. M. could scarcely introduce his little finger between it and the upper jaw. Tongue smooth and hard to the touch, thickly coated with viscid mucus, its point presented a glistening appearance owing to the tension. Mr. M. immediately took thirty ounces of blood from the arm, and an hour afterwards repeated the bleeding to a similar extent. Three hours afterwards Mr. M. found the disease

had rapidly advanced, respiration through the mouth totally suspended, and breathing through the nostrils even attended with difficulty—countenance flushed and anxious—pulse fluttering—breath offensive—in short the patient was threatened with immediate suffocation. Believing that the only remedy by which the patient's life could be saved was the knive, Mr. M. had his head properly secured, the mouth opened as wide as possible, and introduced a scalpel with its flat surface along the tongue, and made a *deep* incision in the most prominent part of the right side. On withdrawing the scalpel a quantity of blood, mixed with *puriform* matter issued from the wound. Two incisions were afterwards made, one in the middle, the other on the left side of the tongue, but no purulent matter followed. The bleeding was promoted by the use of warm water. The patient was promptly relieved, in a quarter of an hour could articulate words pretty distinctly, and his respiration became free and easy.—*Ed. Med. and Surg. Journ. July,* 1827.

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57. *Case of Cynanche Laryngea, in which the operation of Tracheotomy was Successfully Performed.* By Francis White, Esq. of Dublin.—The ill success that has usually attended the operation of tracheotomy, in inflammations of the larynx and neighbouring parts, has almost deterred surgeons from resorting to it, but temporary relief being afforded by it, at the expense of a painful operation. The following case, therefore, in which the operation was attended with complete success, will be read by the profession with great interest. We condense the account from the fourth volume of the *Dublin Hospital Reports.*

John Duff, æt. 33, was attacked with cynanche laryngea, followed by some effusion in the trachea. The usual remedies were employed, but without affording any relief, and the patient was threatened with suffocation. Under these circumstances, Mr. White determined to open the trachea, which he did in the following manner, assisted by Messrs. Carmichael and Roney. "Having made the external incision of sufficient length, and cut through the fascia, I came down to the muscles, and on separating the edges of the sterno-thyroid muscle, the two thyroid veins were exposed, together with a considerable arterial branch,* the pulsation of which was quite perceptible, directing its course upwards towards the cross slip of the thyroid gland: having pressed aside the artery and one of the veins with my finger a little to the right, I then cleared away some cellular membrane, and laid bare the trachea: a sharp-pointed bistoury being now introduced between two of its rings, I cut directly upwards about half an inch in length, when the air escaped with considerable force, and much muco-purulent matter was expelled. Finding a mere division of the part not sufficient to allow a free discharge of the accumulated fluid, which was of a viscid ropy nature, I cut off lateral slips of the cartilages, which leaving ample space, the patient breathed with freedom, and expectorated large quantities of mucus. I attempted to introduce a silver canula into the wound, but the irritation from the necessity of continually withdrawing and replacing the instrument in order to carry off the mucus rapidly collecting about the mouth of the aperture, at length compelled me to abandon the use of the tube. In fact, as the parts lay sufficiently open I determined not to interfere any further, at least for the present. His improvement was now most evident, and it was gratifying to witness his sudden relief from impending suffocation. A careful pupil was left with him to wipe away the discharge which occasionally obstructed the inner opening causing temporary distress and difficult breathing."

Nothing interesting occurred except a severe ptyalism; which reduced the patient much, until the sixth day, when the external wound began to granulate and close; Mr. W. cut away the granulations, and was enabled to introduce a leaden canula, which the patient bore without uneasiness, "and from which he seemed to derive considerable relief. He made several attempts to breathe through the glottis, but to no effect, and on the 14th of April, his former symptoms returned, and became so urgent that I was obliged to enlarge the opening. I had introduced an ivory canula of a conical shape, and slightly curved, which filled up the entire opening, but was only admitted so far as to lie in contact with the edges of the tracheal aperture. This instrument has answered so well, that the patient at present wears it attached to a leathern stock which he buckles behind his neck, and is sufficient to keep the tube in its proper situation. It is occasionally taken out in order to wipe away the mucus which gathers about it.

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* From the situation of this artery there can be no doubt of its being that branch which Mr. Harrison, in his work on the Surgical Anatomy of the Arteries, describes under the appropriate name of Middle Thyroid Artery; and though looked upon as an irregular distribution, yet from its frequent occurrence, the surgeon should be on his guard, as wounding an artery in such depth of parts might be attended with most embarrassing circumstances during the operation.

"It is now two years since the operation was performed, and the patient, whom I saw this day, (March 17,) has during that time worn the tube without any inconvenience, or being in the least prevented from working at his trade. The sides of the opening, which is of an oval shape, and one inch in depth to the trachea, are perfectly healed, smooth, and covered with a thin cuticle. The rima glottidis still remains closed, yet not so much so but to yield to slight expiration, while he is incapable of performing the act of inspiration through the glottis or of speaking without closing the aperture of the canula with his finger. On examining the fauces, the epiglottis appears thickened and standing erect."

58. *Singular Variety of Hernia, treated by* B. C. Brodie, Esq. A middle-aged woman was seized in the evening with pain in the abdomen and sickness. After straining violently in the act of vomiting, she discovered an unusual appearance, which led her to believe that she had suffered a miscarriage. The following evening she was admitted into St. George's Hospital.

"At this time not less than two yards of small intestine, with a corresponding portion of the mesentery, were seen protruding through the anus. The whole mass bore marks of a high degree of inflammation, and the intestine was much distended with air and liquid fæces. On examining the rectum with the finger, it was found that there was a transverse slit on the anterior part of it about two inches above the anus, through which the protrusion of the small intestine had taken place. On attempting to reduce the protruded intestine, at first it readily re-entered the anus, but, when about one-half of it had disappeared, the reduction became difficult, and about one-fourth part of it could not be reduced at all. In fact, no method could be devised by which even a part of it could be made to pass through the slit in the rectum, so as to resume its natural position in the peritoneal cavity. The pressure of the hand caused the small intestine to ascend into the rectum, where it lay only as long as this pressure was continued; and nothing further in the way of reduction could be accomplished.

"Under these circumstances, Mr. Brodie made a longitudinal incision of the linea alba, about two inches in length, below the umbilicus. The incision was continued through the peritoneum into the cavity of the abdomen; and the fingers being introduced at this opening, by gently pulling the small intestine, that portion of it which had protruded through the slit of the rectum was readily drawn back into the abdomen. It having been ascertained, by examining the rectum with the finger, that the reduction was completed, the edges of the wound in the linea alba were brought together by sutures.*

"After the operation, the pulse was scarcely perceptible; the extremities were cold; and the patient was sick, throwing up again immediately whatever she swallowed. In about two hours the pulse was somewhat stronger, and the extremities were warmer; but the restoration of the vital powers was imperfect, and after some hours they again began to fail, and the poor woman died about six o'clock the next evening.

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* During the operation, a part of the small intestine protruded through the wound of the linea alba, but it was readily replaced after the reduction of that which had protruded through the opening in the rectum was completed.

"On examining the body, the peritoneum generally was found much inflamed, and in many parts covered with a layer of coagulated lymph. That portion of the intestine and mesentery which had formed the protrusion was, however, less inflamed than it had appeared to be previously to the operation. There was a transverse opening in the anterior part of the rectum, without any marks of ulceration in the neighbourhood; whence it was concluded that the opening was the result of accidental laceration."—*Lond. Med. and Phys. Journ. June,* 1827.

59. *Chloride of Soda and Lime in Chilblains.*—"M. LISFRANC announces, that the result of his application of these preparations to chilblains, both ulcerated and not ulcerated, continues to be successful. The former have uniformly been cured in a fortnight, and the others in four or five days. He covers the parts affected with a compress charged with cerate, upon which a considerable mass of lint is laid, wetted with the chloride. The apparatus must be kept constantly wet. Intense inflammation does not counter-indicate the use of this remedy; it is merely requisite to dilute or increase its strength, according to the degree of pain which follows its application."—*Archives Générales.*

60. *Extirpation of the Parotid Gland.*—In the second volume of the Heidelb. klin. Annalen, there is an account of an operation for the extirpation of a sarcomatous parotid gland, successfully performed.—*Bulletin des Sc. Méd.*

61. *Acupuncture.*—"Mr. EARLE lately employed this mysterious remedy in a case of obstinate sciatica, which had resisted every other method of treatment. Two needles were introduced, to the depth of an inch, near the sacrum, and kept there a quarter of an hour. The sciatica almost immediately ceased, and the patient passed a quit night, for the first time during some months. The old enemy returned, though not in force, a few days afterwards, and was finally routed by a couple of needles."—*Medico-Chirurgical Review, July,* 1827.

62. *Seton in Preternatural Joints.*—Evidence is constantly accumulating of the value of the seton in the cure of ununited fractures, as recommended by our esteemed friend and coadjutor, Dr. Physick. In the fourth volume of the *Dublin Hospital Reports*, Dr. Brown has related a case of a gardener, aged sixty, who received on the 3d of August, 1825, a compound fracture of both bones of the right leg, and was admitted on the 7th of September into the Meath Hospital, with his general health much impaired, and no appearance of union in the fracture. By proper treatment his health improved, and the fracture of the fibula had united on the 5th of November, but there was soft union between the ends of the broken tibia, allowing of motion. A seton was passed by a fistulous opening through the course of the fracture, and on the 8th of February he was discharged cured.

63. *Nævi Materni.*—"Among the novelties of medical practice, we may mention a curious remedy for nævi materni, first employed, we understand, by Mr. Hodgson, of Birmingham, and now in course of trial by some surgeons of London. It is vaccination of the nævus, in several points of its surface by the specific inflammation of which, it is said, the nævus is arrested in its progress or caused to slough. We recommend our surgical brethren to try this easy and simple remedy.*

"We apprehend, however, that no plan will be equal to that of the ligature. If the tumour be too large for a single ligature to surround it, a needle should be passed under the centre of the nævus with a double ligature, and then the two halves surrounded in the usual way. We believe that Mr. Lawrence ties the ligature very tight, and cuts it away at the end of 48 hours, to lessen irritation. A great number of nævi, of various sizes have been removed in this manner by metropolitan surgeons, of late, without a single bad consequence."

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* It has recently succeeded under Mr. Earle, at Bartholomew's.

In one of the volumes of the Transactions of the Medico-Chirurgical Society of London, Mr. Wardrop published a paper on a natural cure which nævi materni sometimes undergo by spontaneous ulceration. He has since imitated this natural cure by applying a strong solution of oxymuriate of mercury to a nævus on a child's back; the skin ulcerated rapidly, destroying the substance of the tumour. Two cases are reported in No. 181 of the Lancet, in which a similar practice was adopted with success.—*Medico-Chirurgical Review, July,* 1827.

64. *Excision of Carious Joints.*—The success which attended, in many cases, the removal of the protruding extremity of the bone, in compound dislocation of the shoulder, elbow, and ankle joints, led Mr. PARK, of Liverpool, to believe that in certain diseases of the joints, the excision of the carious extremities of the bones might be attended with similar advantage. Accordingly, on the 2d of July, 1781, in a case of scrofulous disease of the knee, he extirpated the whole joint, removing more than two inches of the femur and one inch of the tibia. The operation was completely successful, the man, (a sailor,) returning to his business, and performing all the duties of a seaman.

In 1782, M. Moreau, (the father,) presented to the Academy of Surgery of Paris, a memoir, in which he proposed the excision of carious joints as a useful substitute, in some circumstances, for amputation. In 1786, he communicated to the Academy, "an account of an operation in which he removed the head of the humerus, and the corresponding glenoid cavity of the scapula, which were carious." "In 1789, he addressed a memoir to the same society, explaining his new method of treating carious joints;" and "on the 17th of September, 1792, he removed the whole of a carious knee joint," in the presence of Baron Percy and others. The operation was attended with success. M. Moreau, (the son,) relates* several other cases in which the operation of removing the shoulder, elbow, and ankle joints was perfomed with complete success, by his father, by Baron Percy, and by himself.

The above evidences of the advantages attending the excision of carious joints—the complete success which Baron Percy has met with, in removing the shattered extremities of the bones, in gun shot wounds of the joints—and the astonishing success that has attended the removal of the extremities of the long bones, when they have protruded through the soft parts, in compound dislocations; to say nothing of the cases of excision of carious joints, recorded by White, Bent and Orred, induced Mr. Crampton to revive the operation of Mr. Park; an operation which had not been repeated in Great Britain till performed by Mr. Crampton, on the 4th of February, 1823. The operation was successful, and Mr. C. has since repeated it in two instances. These operations if not followed by all the advantages that might be wished for, prove, at least, that the operation is a safe one, that even so large an articulation as the knee joint may be excised with safety, and give grounds for hope that, under favourable circumstances it may be attended with success. We condense the details of the cases.

Case I.—A soldier, æt. 23, of distinctly marked scrofulous aspect, with a white swelling of the right elbow joint of about ten months standing, the swelling extending at least a hand's breadth above and below the joint; suppuration over the inner condyle of the humerus, and an opening that had degenerated into a large and irregular ulcer, at the bottom of which the bone could be felt carious; health impaired; pulse 120, and feeble; far advanced in hectic fever; was sent into the general hospital, for the purpose of having his limb removed, which was considered the only means of preserving his life.

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* "Cases of Excision of Carious Joints."

Thinking this a fair case for performing Mr. Park's operation, Mr. C. performed it on the 4th of February, 1823, in the presence of a great number of surgeons, in the following manner:—"the patient was placed, (as recommended by M. Moreau,) upon his belly on a table covered with a mattress, and pillows so arranged as to make his posture as little inconvenient as possible; the diseased arm hung over the edge of the table, presenting its posterior and inner surface to the operator: the brachial artery being compressed by an assistant, an incision was now made along the spine of the inner condyle, commencing about four inches above, and terminating about two inches below, its tuberosity. This incision passed through the centre of the ulceration, and laid bare the ulnar nerve, which was carefully raised from its groove, and drawn to the inner side of the incision.* A similar incision parallel to the first, was made on the outer side of the humerus, and then a transverse section, which cut through the tendon of the triceps muscle, immediately above its insertion into the olecranon, connected the two longitudinal incisions, so that the wound represented pretty accurately the letter H; the lateral incisions, however, being slightly incurvated, so as to follow the bend which the forearm made with the arm. The upper flap, consisting of the lower extremity of the triceps muscle, the thickened and diseased cellular substance, and integuments, was raised from the flat surface of the humerus, to which it had a very slight attachment; the lower flap was separated in the same manner, so as to lay bare the upper extremity of the ulna and radius; the scalpel laid on its flat surface was now pushed between the flexor muscles aud the bone on its anterior surface, at the distance of three inches above the tuberosity of the inner condyle; and retained in this situation by an assistant. The saw was then applied, and the bone was divided immediately over the flat surface of the knife, which served as a protection to the muscles beneath. The separated portion of the humerus was now raised with the utmost ease by the finger and thumb of the left hand, while the capsular and lateral ligaments, degenerated to the state of a lax cellular substance, were separated by running the knife round the condyles, keeping the edge as closely as possible to the bone. The lower extremity of the humerus being removed, the articulating surfaces of the radius and ulna were completely exposed; but with the exception of the cartilage which covers the olecranon, (which was partially eroded,) every thing appeared sound. The olecranon was now removed, and the wound was sponged out; as there was no bleeding which rendered it necessary to have recourse to a ligature, the flaps were laid down, and secured to each other by four points of suture. The forearm was placed at a right angle with the arm; the wound was covered with pledgets of lint wetted with spirits and water, and the man was laid in bed, with the arm supported on a suitable pillow."

The patient passed the night well; suppuration with slight symptomatic fever, set in on the fourth day, but every thing proceeded favourably. On the ninth he sat up in a chair. The wound, however, was slow in healing, and Mr. C. sent the patient to the sea-side, five weeks after the operation, where he recovered so rapidly, that on the following week he walked to town, a distance of nearly five miles to see Mr. C. On the 18th of September "the wound, with the exception of a small superficial ulceration about the place which had been occupied by the inner condyle, was completely closed; the arm, when allowed to hang by the side, retained nearly a semi-flexed position, but by a voluntary effort he was able to give a slight degree of flexion to the forearm, so as to lessen the angle which it formed with the arm. He had the use of the fingers, so as to be able to use his knife and spoon; and on the 27th of Nov. 1823, *he signed his own discharge with the right hand.*" The constitution of the patient was so bad that an abscess subsequently formed in his loins. In what way this terminated is not known, which is to be regretted, for though of no importance with respect to the success of the operation, it is of some in reference to the propriety of performing it.

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* From neglecting this precaution in M. Moreau's case, the ulnar nerve was cut across, and the ring and little finger were deprived of the powers of motion.

Case II.—" Susan Connolly, æt. 23, of a strumous habit and emaciated appearance, marked by several scars of scrofulous ulceration, some of which are still open on the left hand and arm. The right knee is considerably enlarged, of an irregular shape, projecting much to the inner side over the head of the tibia, and measuring three inches and a half more than the sound knee, the surface smooth, white, and shining, but marked by the ramifications of large blue veins. Severe pain, much increased by pressure, or by the slightest motion, is felt through the joint: a small ulceration under the inner hamstring discharges a great deal of thin greenish-coloured matter; the joint is permanently contracted, the leg forming a very acute angle with the thigh; pulse 96, and feeble; skin rather hot; tongue white, with red edges; appetite bad; tendency to diarrhœa; gets but little rest, from the pain of the limb; catamenia not present for the last two years. Disease commenced about twelve months ago, but the contraction of the joint, the severe pain, and the alteration of her health are but of six months standing. The usual treatment had been adopted, but without even temporary relief. For the last six weeks she has had regular attacks of hectic fever, accompanied with profuse perspirations and diarrhœa, which even opium does not control."

The excision of the joint was performed in the following manner. " An incision, commencing about three inches above the outer condyle, and a little below the axis of the femur, was continued to about an inch below the head of the fibula. The acute angle, which the leg formed with the thigh, necessarily gave to this incision the form of a crescent. In making the incision the knife was carried down to the bone; a similar incision was made on the inner side of the joint. The lateral incisions were united by a transverse cut carried below the patella. The flap, thus formed, was raised by a rapid dissection, and the cavity of the joint was completely exposed: for the extent of more than three inches above the condyles the femur was without periosteum, the purulent matter lying in contact with the naked bone. At the point where the periosteum appeared to be united with the bone, the saw was applied, and the bone was divided, the soft parts being protected by a spatula which was passed between the muscles and the bone. The separated portion of the femur was now dissected out, and so slight were its connexions with the soft parts, that this part of the operation, which I expected would have been attended with some difficulty, was effected with the greatest ease. The articulating surface of the tibia was now fully exposed; it was totally deprived of cartilage, and was in a state of caries. By means of a strong and short knife, such as is used by shoemakers, I was enabled to pare away about half an inch of the head of the tibia, the cancelli of which were loaded with a lardaceous matter, and with pus.

" The cavity of this great wound was now sponged out, when upon minutely examining the cut suface of the femur, I found that the cancelli were diseased and filled with pus, and that posteriorly the periosteum was detached from the bone. I therefore sawed off about an inch and a quarter more of the femur. On placing the extremities of the femur and tibia in contact, the flap containing the patella was found to be about three inches too long, and as the patella itself was totally deprived of its cartilage, and in a state of caries, the exceeding portion of the flap including the patella, was removed by a transverse incision. No artery was divided which required the application of a ligature. The flap was retained in its position by two points of the interrupted suture, and compresses wetted in spirits and water were laid over the wound. The limb was now placed in position in one of Assellini's " carrying splints," which had previously been carefully adapted to the size and length of the limb, it extended from above the trochanter major on the outside, and from the ramus of the pubis on the inside, to about four inches below the foot, it was supplied with a sole piece, which supported the foot, and was carefully padded with a mixture of baked hair and wool."

The woman bore the operation well, the wound united by the first intention, and was healed in three weeks. On the 12th of September she was attacked with an epidemic erysipelas, which attacked the affected leg and thigh, succeeded by an abscess, which burst through the old sinus in the ham, and continued to discharge for three or four weeks and then healed. She subsequently suffered from two or three attacks of erysipelas, each of which terminated in the formation of matter. She was discharged, June 27, 1824, in very good health; but no bony union had taken place between the femur and tibia. In the winter of 1825–6, hearing that she was in bad health, and living in great poverty in a damp cabin in the country, Mr. C. had her brought to the hospital. She was in a wretched state of health—had suffered repeated attacks of hæmoptoe—had cough, with purulent expectoration and night sweats. "She had no pain in the limb, but there was a general thickening about the joint, as if the disease had been reproduced, and the sinus in the ham continued to discharge a thin whey-coloured matter. By suitable attention her health again rallied, and she returned to the country in the month of May, 1826." Shortly afterwards her health again declined, and she died in July, 1826. On examination, the posterior part of the femur, above the condyles, was found in a state of necrosis, deprived of periosteum, the walls as thin as card paper, and the medullary cells loaded with pus.

Case III.—"Ann Lynch, æt. 22, a strong, and remarkably good-looking country girl, with dark hair, blue eyes, and sallow complexion, but presenting no peculiar character of a strumous habit, was admitted into the Meath Hospital, on the 3d of May, 1823. About four years ago, she was seized with a sudden and severe pain in the right arm. The pain soon left the arm and settled in the right knee, which, from that time, continued to be, more or less, affected with severe pain, principally confined to the inner condyle. The pain was much increased by pressure on either condyle, by the slightest motion, and by the heat of the bed, at night. The joint became perfectly stiff, and a good deal contracted, so that she could only touch the ground with her toe when standing on the left leg, and the swelling which for the first few months was inconsiderable, gradually increased, and is now of a very great size, globular in its form, elastic to the touch, of a dusky red colour towards the inner side, and the surface intersected by numerous and large blue veins. She describes the pain as being excruciating, particularly at night time. Within the last two months, symptoms of hectic fever have manifested themselves, but upon the whole, her appearance is not very unhealthy. She has lost but little flesh, and the treatment, both local and constitutional, to which she has been subjected since her admission into the hospital, has abated the pain, and improved her general health."

On the 4th of August the operation was performed, as in the case of Connolly, but the patient was so ungovernable that four strong assistants could, with the utmost difficulty, retain her on the table. This necessarily prolonged the operation, and, no doubt, increased its severity. The patella, which was carious, was removed with the lower portion of the flap; but the articulating cartilage of the tibia appeared sound; the greater part of it, however, was pared away, and the semilunar cartilages, of which only the inner one exhibited any marks of disease, removed.

"The treatment was conducted, in all respects, as in the case of Connolly, with this difference, that I was obliged to resort to a variety of contrivances to keep the limb in position. The same unmanageable disposition, which caused so much embarrassment during the operation, greatly interfered with her recovery. Nothing could induce her to remain for one moment in any position which she found was attended with inconvenience, the consequence of these constant changes of position, was, that the extremity of the femur was often protruded through the wound. Notwithstanding all this, and the occurrence of a large sloughy sore on the buttock, in consequence of an insufficient attention, upon her part, to cleanliness, her general health was but little impaired: a small exfoliation took place from the extremity of the femur, and in about two months she was removed from her bed to a chair. In about four weeks after the exfoliation of the femur, the wound was completely healed, and the limb had acquired a considerable degree of firmness. About six months after the operation the femur and tibia were consolidated by a firm bony union, and the woman, though timid beyond all example, began to lay her foot gently to the ground, supporting the weight of her body, however, on crutches." She now went into the country; and in October, 1824, walked nearly five miles. November 3, 1826, Mr. C. examined the limb. "The femur and tibia are firmly consolidated: the leg and thigh are not in the slightest degree wasted, but the limb is considerably bowed outwards. She wears a shoe with a cork sole, four inches thick; and, to use her own expression, 'is able to stand or walk the length of a day.'"

Should Mr. C. repeat the operation of excision of the knee joint, he intends to adopt a different mode. He has satisfied himself, "from repeated trials upon the dead subject, that the operation can be most safely and rapidly executed by separating the condyles from all their attachments, previously to sawing the bone; as soon, therefore, as the flap containing the patella is turned upwards, the edge of the knife should be carried round the condyles, close to the bone, so as to divide *all* the ligaments which connect the femur with the tibia: the tibia can then with great ease be pushed backwards, and as much of the projecting condyles can be removed as the operator may think necessary." —*Dublin Hospital Reports, Vol. IV.*

We have given a very full account of these operations, although it occupies more space than we usually allot to one subject, in this department of our Journal, since we conceive the details to be of great importance in estimating the value of the operation.

The above cases have been brought forward to show the safety of the operation, a fact they sufficiently prove, even when performed under exceedingly unfavourable circumstances; but there is another question of equal importance to be decided, and that is, the expediency of performing it; and it is as bearing upon this point, that we have thought it right to give full details of the cases. These we think, make it sufficiently evident that when the patient is of a decidedly scrofulous constitution, is wasted with hectic fever, and the disease is extensive and has continued for a length of time, the relief from the operation will be but temporary, and will not compensate for the sufferings attendant on the operation; the first and second cases prove this. Under more favourable circumstances, however, the operation may, no doubt, be resorted to with advantage; as it was in Mr. Crampton's last case.

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65. *Empyema.*—A man was brought to the hospital with a punctured wound in the thorax, he had symptoms of a large effusion of blood in the right cavity of the chest, this arose from a division of one of the intercostal arteries, the artery could neither be tied nor a direct exit to the blood given, the treatment consisted in a proper position of the patient, venesection amounting to one-hundred and twenty ounces in forty-eight hours and acid nitrated drinks; a few days after the accident the patient passed large quantities of blood with his urine, and in the space of twenty-four hours was entirely relieved of all the empyematic symptoms, and was convalescent in five days.—*Bibl. Ital.* 1826.

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66. *Extirpation of the Parotid Gland.*—Dr. MANFREDINI of Modena, has performed this operation twice with happy results; the first on a countryman in whom the tumour was exceedingly large, being three inches and a half in height by twelve in circumference, involving the whole angle of the jaw, and reaching nearly to the mouth. The operation was rendered difficult from its implicating the external carotid from which it received several large vessels—ten of which were obliged to be tied; the patient recovered perfectly except a slight distortion of the mouth. The second operation was on a lady of Mo-

dena, in whom the gland was in a cancerous condition—this was also completely successful.—*Biblioteca Ital.* 1825.

67. *Lithotomy.*—Professor Giorgi appears to have been very successful in the results of his operations for the stone by Vaca's method. Of twenty-eight patients operated on, twenty-five were cured.

68. *Emphysema.*—M. Vitry relates in the Archives Générales de Médicine, for March, 1827, a case of emphysema of the subcutaneous tissue of the whole body, supervening to a convulsive cough, in a little girl twenty-six months old. M. V. gave issue to the air by numerous incisions, and thus cured the little patient.—*Annales de la Médecine Physiologique.*

MIDWIFERY.

69. *Resuscitation of apparently Still-Born Children.* By J. Toogood, Esq. Member of the Royal college of Surgeons, London.—"Having recently met with a case of an apparently still-born child, which was recovered after an unusual length of time, I am induced to lay an account of it before the public, because from my experience in many cases, I believe a very large proportion of children, apparently dead-born, may be resuscitated, if proper means be resorted to, and persevered in for a sufficient length of time. But the modes generally employed to restore life, such as immersing the infant in warm water, friction, and pouring stimulants down the throat, are not at all calculated to produce the effect intended; and, if these means do not succeed after a short trial, all further attempts are generally abandoned. The plan I always adopt, which has never failed where the child was living during the birth, is very simple and only requires perseverance. I hope, therefore, I shall not be occupying the time of your readers unnecessarily by detailing some successful cases, under circumstances by no means favourable, which I have selected from a great many more.

"Grace White, a very weakly woman, far advanced in consumption, was seized in the morning with uterine hæmorrhage, which continued slightly till the evening, when I saw her; and, while standing by her bed-side the flooding increased with such violence that I thought it best to deliver her instantly. The child was still-born. As soon as I had removed it from the mother, and seen her safe from any immediate danger, I placed a napkin over the child's mouth, and inflated its lungs from my mouth pressing out the air from the chest afterwards, and thus imitating natural respiration. After having continued this process for thirty-five minutes, the child made a very slight attempt to breathe, and the face became slightly suffused; by persevering ten minutes longer, the free action of the lungs was established and the child cried lustily.

"The next case was that of a poor woman, named Sarah Holmes, of the parish of Spaxton, who had been in labour a long time with a presentation of the arm, and as it was her first confinement, it became very difficult to turn the child, particularly as she was advanced in age, and the parts were very rigid. The child was still-born; but, by pursuing the same plan actively for three-quarters of an hour, animation was perfectly restored.

"The next was a case of presentation of the funis; and, as the labour was slow, the child was still-born, but recovered by the same means in half an hour.

"The last case with which I shall trouble you was such as to encourage the attempt at resuscitation under any circumstances. It was a case of twins, and the second child presented with the head, before which a considerable portion of the funis had descended. The delivery was extremely slow, from the general weakness of the woman, who had been for a long time in a bad state of health, and the child was apparently born quite dead. As the mother's situation was extremely critical, more than half an hour had elapsed before I could attend to the child, and, on inquiry, I found it had been wrapped in a cloth, and placed on a chair in another room. I immediately made the attempt to restore it, and, by persevering steadily for twenty-five minutes, I had the satisfaction to see symptoms of returning life, and in about fifteen minutes more the child breathed freely.

"Every thing in this last case was unfavourable to the restoration of the child—the mother's long-continued disease, the circumstance of her having two children, and more particularly the delay which took place before any attempt was made, during which time the child was exposed in a room without fire in the winter, with a partial and very slight covering.

"I am warranted by my own experience in recommending the attempt to restore all still-born children who have been alive during the birth, and if the means of resuscitation above mentioned be actively employed and steadily persevered in, I believe the majority of cases will be successful. In all cases the restoration of a child is a most satisfactory circumstance, and in some instances of the greatest possible consequence. I have never found any thing necessary but the regular inflation of the lungs, which I do with my own mouth, in the way I have described, and have generally observed the first symptom of returning life to be a tremulous motion of the respiratory organs; the child next makes a very feeble attempt to inspire, and the colour of the face changes. The inflation should then be made quicker; and, as the attempts to breathe increase, a little sal volatile or brandy, rubbed over the palm of the hand, and held over the mouth during the inflation of air, will materially assist the recovery, and has a better effect than pouring stimulants into the stomach. A few smart slaps on the glutei muscles will now generally complete the recovery." —*Lond. Med. and Phys. Journ. August*, 1827. The author appears to think that the above method of resuscitating still-born children is novel. Dr. Dewees has been in the habit of employing it for nearly forty years. Vide Syst. of Mid. He relates also in his lectures cases of resuscitation as remarkable as the above.

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70. *Successful Case of Transfusion in Uterine Hæmorrhage.*—In the July No. of the *London Medical and Physical Journal* another successful case of transfusion in uterine hæmorrhage is related by Mr. Douglass Fox. The patient was greatly debilitated by the flow of blood, the fœtus at the sixth month being expelled, and the placenta retained by an hour glass contraction. The hæmorrhage was arrested by the introduction of the hand into the uterus, and the placenta removed. But though the hæmorrhage had ceased, Mr. F. thought "there was every reason to apprehend the immediate dissolution of the patient from extreme exhaustion, as in this stage of the complaint she had become totally unable to articulate, to move, or to swallow; the pulse at the wrist was imperceptible, and the general appearance of the patient wore the aspect of death." Blood was injected into a vein of the arm, and the patient eventually recovered.

[The expedient of transfusion revived by Mr. Blundell, has been resorted to, within the last two years, in nearly a dozen cases, in most of which the patients are said to have recovered. We do not hesitate to believe these accounts, but we very much doubt whether the patient would have died, had the remedy been withheld. We believe this principally upon the following grounds. 1st. Because women bear excessive losses of blood without death following. 2d. Because the quantity of blood transmitted to the alien veins, does not appear sufficient to prevent death, since but a very few ounces have been declared to answer. 3d. Because the additional quantity of blood, though it increases by so much the stock of the patient, does not necessarily or contingently promote the tonic contraction of the uterus, without which, all "appliances and means to boot," will be found unavailing. 4th. Because we have never yet met with a case, where the dormant powers of the uterus could not be roused into successful action, if means were timely employed; were of a proper kind; and properly conducted. W. P. D.]

MEDICAL JURISPRUDENCE.

71. *On the Detection of Hydrocyanic Acid in the Bodies of Animals poisoned by it.*—M. M. Lassaigne and Leuret, some time since pointed out an extremely delicate test to detect the prussic acid in the bodies of poisoned animals, namely, the persulphate of iron or the persulphate of copper. Being desirous of ascertaining after how long a period the poison might be discovered, these gentlemen have since made experiments in which "animals were killed by hydrocyanic acid introduced into their food, or thrown into the stomach in a diluted state, the dose never surpassing more than an equivalent of five or six drops of the pure acid, or less than two drops: the animals were left after death for twenty-four hours in a chamber, and then buried in moist earth a foot and a half or two feet deep.

"The disinterment took place after various periods, from fifteen days to a month, and the stomach and the first portions of intestines being separated, were well divided and mixed with pure water, and distilled; a little sulphuric acid was added to the substances in the alembic, and the recipient was cooled by ice and water.

"The products were rendered slightly alkaline, and then tested by the persulphate of iron or sulphate of copper, and a little excess of muriatic acid was poured upon the precipitates occasioned by these salts. No prussic acid could be discovered in animals, the viscera of which were in a state of complete putrefaction; it was found after intervals of two or three days, but never after a longer period than eight days.

"From these experiments it appears, 1. That prussic acid cannot be discovered in animals poisoned by small quantities of it after exposition of these bodies for two or three days to the air. 2. That the disappearance of the poison in the viscera after a longer period than this is due to its decomposition, which is favoured by the contact of the putrescent animal matter. 3. That when it is necessary to examine a body judicially, to ascertain the presence of this poison, it is important that it should be done as quickly as possible."—*The Quarterly Journal of Science, Literature, and Art, from the Journ. de Chimie Méd. Dec.* 1826.

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72. *On the Detection of Antimony in Mixed Fluids.* By Edward Turner, M. D. &c.—Many reagents decompose tartar emetic, and cause precipitates in its solutions. Of these the principal are alkaline substances; the stronger acids, as the muriatic and sulphuric; the infusion of gall-nuts and sulphuretted hydrogen. Dr. Turner thinks that the last of these is the only one sufficiently delicate, certain and precise, to be entitled to confidence. On transmitting the sulphuretted hydrogen gas through a fluid containing antimony, the solution will acquire an orange colour, which can scarcely, he says, be mistaken for that of any other metallic sulphuret, by a person acquainted with its appearance. Its colour is quite different from that of orpiment, or of the bi-sulphuret of tin; and from the sulphuret of cadmium, to which it bears a greater resemblance, it is distinguished by its ready solubility in a solution of pure potash. The sulphuretted hydrogen merely indicates the presence of antimony,—without directly showing in what state it existed. This is of little consequence, however, in judicial cases, as all soluble antimonials are poisonous. Dr. Turner gives the following directions for the use of the test. "The fluid supposed to contain tartar emetic, should be mixed with a drachm or two of muriatic and tartaric acids, boiled for a few minutes to separate any substance coagulable by heat, and then allowed to cool, and filtered. The liquid should next be exposed to the action of sulphuretted hydrogen, and boiled to expel the excess of gas; after which the sulphuret will subside, if tartar emetic had been present." To obtain the metal in a separate state, Dr. T. recommends that the sulphuret obtained in the above manner, be placed in the middle of a glass tube about three inches long, and a quarter of an inch in diameter. "One end

of the tube is connected by means of a cork with a vessel from which hydrogen gas is evolved; and to its other extremity is adapted a bent tube, which opens under water, so as to conduct away the hydrogen, and at the same time exclude atmospheric air. After the air within the apparatus has been expelled, heat is applied by means of a spirit lamp to the part of the tube on which the sulphuret is placed. The decomposition of the sulphuret commences at a temperature by no means elevated; but in order to render it complete and fuse the antimony, the glass should be made red hot, and kept in that state for five or six minutes. The temperature at the close of the process may with advantage be increased to bright redness by the use of the blow-pipe.

"The appearance of the metal within the tube depends upon the manner of conducting the experiment. If the sulphuret had been placed in a heap, the metal is found partly in a spongy state, and partly in minute globules; but if it had been diffused over a considerable space, no globules appear, and the metallic lustre is indistinct. The metallic nature of the spongy mass may, in general be brought distinctly into view by placing it on a piece of white paper, and pressing it with the nail or the blade of a penknife.

"The results also depend on the velocity with which the hydrogen is transmitted through the tube. If the gas passes rapidly, some of the metal is hurried off at the moment of separation from the sulphur, and is deposited within the tube as a metallic film, which is sometimes very distinct. If, on the contrary, the passage of the gas is slow, this appearance does not take place.

"By means of this process, I have succeeded in procuring from the tenth of a grain of the sulphuret metallic antimony, the lustre of which could be distinctly seen with the assistance of a lens.

"Should a considerable quantity of animal or vegetable matter subside with the sulphuret, the metallic antimony will then be so mixed with charcoal that its lustre cannot be seen distinctly. In a case of this kind the mixture should be placed in an open tube, and heated to redness by means of a spirit lamp. The antimony is then oxydized, and the oxide, which attaches itself to the cool parts of the tube in form of a white powder, may be recognised by its appearance and volatility."—*Ed. Med. and Surg. Journ. July,* 1827.

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73. *On Poisoning with the Sulphurets of Arsenic.*—"Several memoirs have lately appeared in the Parisian journals on the subject of poisoning with the sulphurets of arsenic; and as they explain some facts which have long appeared unintelligible, we shall present a condensed view of the whole. Till very lately it was believed, that, as the artificial sublimed sulphurets are much more poisonous than those of natural origin, some essential difference existed between them in chemical composition. M. Guibourt, however, has completely shown the cause of the differences in their physiological effects. For he has found that the artificial sulphurets always contain a large proportion of oxide of arsenic, sometimes so much as ninety-six per cent. This observation has been more recently confirmed by M. Courdemanche; and we may add that we have seen the cakes of sublimed orpiment lined on their concave surface with octaëdral crystals of the oxide. M. Guibourt, on the presumption arising from this difference, and from the known harmlessness of arsenic in its metallic state, ventured to hint, that the proper sulphurets, such as the native sulphurets, and that procured by transmitting sulphuretted hydrogen through a solution of the oxide, are not deleterious. But Orfila has contradicted this statement by positive experiments. He found that when forty, sixty, or one hundred and twenty grains of the pure artificial sulphuret procured by precipitation, or of the native orpiment of Hungary, or the native realgar of Transylvania, were introduced into the stomach, or into the cellular tissue of dogs, death took place in two, four, or six days, under the usual symptoms of poisoning with arsenic. It is certain, therefore, that the sulphurets of arsenic, when perfectly pure, are poisonous; but they are much less so than the oxide. Their poisonous power appeared a remarkable and anomalous fact, considering that metallic arsenic has been proved

not to be poisonous in its pure state, or when alloyed with tin, or when combined with iron and sulphur in the ore mispickel or arsenical pyrites. But the anomaly has been accounted for by M. Courdemanche, who finds, (Jour. de Pharm. May, 1827,) that if the pure sulphuret of arsenic be boiled even in distilled water, a part of the water is decomposed, sulphuretted hydrogen is evolved, and the white oxide of arsenic is formed and remains in solution—that this change takes place in the cold, but much more slowly—and that it is very much accelerated by the presence of vegetable or animal principles in the water. In all likelihood, then, the sulphurets are poisonous merely because they are in part converted into the oxide. These observations will also account for the statements of Hahnemann regarding the solubility of the sulphurets of arsenic in water. They are insoluble as sulphurets, but will lose weight by boiling, because they are decomposed."—*Ed. Med. and Surg. Journ. July, 1827, from the Journal de Chimie Médicale et Journal de Pharmacie, passim.*

74. *Poisoning by Phosphorus.*—"On the 24th of April, 1824, a young man, twenty-eight years of age, swallowed half a grain of phosphorus mixed with very hot water. Feeling no effect, he took three days after a grain and a half in the same vehicle at a single dose. He breakfasted almost immediately after, and experienced no remarkable symptom till five, when he had no sooner swallowed some food than he complained of violent pains of the stomach and belly. These were soon followed by incessant and painful vomiting, and abundant discharges from the bowels during the night. On the following day these symptoms were aggravated by violent contractions of the belly. Emollient injections produced neither excretion nor relief. The patient, however, followed his ordinary pursuits; and it was only on the 4th of May, (after a full week,) that he communicated to M. Worbe the circumstances of his complaints. The epigastrium was then extremely painful to the touch, the abdomen was very tense, and its muscles strongly contracted; and he was unable to continue out of the horizontal posture. The features had an expression of sadness, languor, and wavering; the eyes were heavy, and the conjunctiva and skin of a strong yellow tint. The respiration, however, was natural, the pulse was only a little hard, and the tongue and mucous membrane of the mouth were unchanged. *Membra generationi inservientia necquaquam affecta.* The remedies were leeches to the epigastric region, the warm bath, fomentations, and emollient cataplasms, mucilaginous injections, and for drink gum solution in abundance. The leeches were not applied till noon. At ten in the evening the patient was delirious, convulsed, and unmanageable, but carried his hands instinctively to the epigastric region. A physician summoned at seven the next morning ordered to each elbow fifteen leeches, which procured a good deal of blood. M. Flourens, introduced by M. Worbe, recommended leeches to the head; and they were accordingly applied. The condition of the patient, however, became hourly worse. The urine escaped involuntarily; the alvine discharges became frequent and copious, with flabbiness of the muscles; the beats of the heart became weak, and those at the wrist were no longer perceptible. The surface, which was now intensely yellow, became covered with a cold sweat, which was most abundant on the forehead; the extremities became cold; and death took place at three in the morning of the 6th, the second day of his application to M. Worbe.

"The external appearances after death were, yellow tint of the skin, the cutaneous veins of the belly and upper part of the thigh prominent, and the skin of these parts checkered with livid spots, sugillations, and venous impressions. The scrotum was bluish and phosphorescent, according to the observation of M. Bogros. The chest contained much blackish serous fluid; the lungs were gorged with blood; the heart was soft, collapsed, and contained little blood. The muscular tissue only of the stomach was inflamed; the other membranes of the stomach and duodenum were pale and flaccid, and gas was developed in their submucous cellular tissue. The cardiac and pyloric orifices presented black or rather slate-coloured patches, which might be compared to the blood-shot spots seen on the conjunctiva. All the intestines were tympanitic, but contained little fluid. The bladder was sound, and contained four ounces of urine. Permission to examine the brain could not be obtained.

"M. Worbe and M. Bogros killed two dogs, one of seven the other of eighteen pounds weight, by giving the first half a grain, and the second a grain and a half of phosphorus dissolved in hot water. In the former dog the cardia and pylorus presented the black spots observed in the stomach of the subject above mentioned, but the brain and its appendages were sound. In the second several ecchymosed spots were found in the cellular fat, contiguous to the base of the ventricles of the heart, and the surface of the auricles. The villous membrane of the alimentary canal, especially that of the stomach, was folded or contracted, and easily detached; and the tube was abundantly filled with blackish matter, as far as the cœcum. The veins of the brain were filled with black blood; the membranes were injected and the pia mater was ecchymosed."—*Ed. Med. and Surg. Journ. July,* 1827, *from the Mém. de la Soc. Med. d'Emulation, Tom. IX.*

75. *Rupture of the Cœcum.*—James Burn, a strong and muscular man, wrestling with a neighbour, after a severe struggle succeeded in throwing his antagonist, who fell on his back, with his knees bent upwards, and Burn fell nearly at the same moment with his abdomen on his antagonist's knees, receiving a violent contusion, chiefly in the region of the umbilicus. According to his own account, he felt as if something had given way internally; he fainted immediately, but soon recovered, complaining of severe pain in his abdomen, with vomiting; he died forty-eight hours afterwards.

On examination, Mr. Speer observed the following appearances:—"the abdomen being opened, a quantity of the contents of the intestines was found in the cavity, and when pressure was made over the large intestines with the hand, their contents were forced through an aperture in the intestines; and on further examination, the cœcum was found ruptured. The aperture was about two inches in circumference, with uneven ragged edges, and evidently the consequence of the fall he had received; it was surrounded with marks of extensive inflammation, as were all the small intestines, on whose surface several layers of coagulable lymph had been deposited in different places, forming a false membrane of a soft texture."—*Dublin Hospital Reports, Vol. IV.*

CHEMISTRY.

76. *On the Composition of certain Black Vomitings, and their Analogy with the Black Matter of Melanosis.*—"M. Lassaigne has lately analyzed with great care the black matter vomited in a case of scirrhous ulceration of the stomach, and has found that its colour, as was conjectured by M. Breschet, is owing to blood, altered in its properties nearly in the same manner as in melanosis. The patient had long been evidently affected with scirrhous of the stomach, was seized latterly with profuse vomiting of a black fluid, and after death the whole pyloris was found scirrhous and ulcerated, with an aperture communicating with the cavity of the third curvature of the duodenum.

"The matter vomited had a chocolate brown colour, and held in suspension darker coloured flocks, which gradually fell to the bottom, leaving a reddish-brown fluid, resembling a solution of altered blood. The fluid was acid, but gave, by distillation at a low heat, a very alkaline liquid containing much ammonia. The residue was strongly acid, gave out much ammonia with potash; yielded to alcohol a solid acid possessing the properties of the caseic acid procured by Proust from old cheese,—a fluid acid which M. Lassaigne pronounces to have been the lactic, but which, according to the late corrections of Berzelius, the discoverer of that supposed acid, must have been modified acetic acid—and a little osmazome; and the residue after the action of alcohol consisted of a principle intermediate according to M. Lassaigne between mucus and albumen, but which, from the properties he mentions, appears to have been casein. The dark flocculent matter was evidently altered blood, for weak sulphuric acid acquired a reddish-brown colour when gently heated with it; the solution yielded with ammonia reddish-brown flocks, which, when dried, resembled exactly the dry colouring matter of the blood; the alkalis acted on the original flocculent matter as on blood, and when incinerated, it gave distinct indications of the presence of oxide of iron and phosphate of lime.

"The analogy between the sediment of the matter vomited in this case, and the black matter of melanosis, is therefore very great. The presence of the caseic acid has not to our knowledge been remarked in any of the natural solids or fluids, and consequently, as M. Lassaigne suggests, it appears to be a pathological formation."—*Journal de Chimie Médicale, Sept.* 1826.

77. *Chemical Analysis of the Serous Fluid of a Blister.* By M. BRANDES and BIRMANN.—The results of this analysis are as follows:—

"Albumen, coagulable by heat, insoluble afterwards, and bearing some similarity to fibrine - - - - - -	5.25
"Albumen soluble in water - - - - -	0.50
"Carbonate of soda, lactate of soda, hydrochlorate of ammonia, hydrochlorate of soda, phosphate of lime, sulphate of soda, and salts of potash, combined with an animal matter, precipitated by tincture of galls -	0.26
"Water - - - - - - - -	93.99
	100.00

"Its composition is therefore the same with that of other serous secretions."—*Bulletin des Sc. Méd. from the Archiv. des Apotheker.*

MISCELLANEOUS.

78. *Speranza's Clinical Reports.*—Dr. SPERANZA, Clinical Professor in the University of Pavia, gives the result of his practice in that institution. Of one hundred and fifty-three admitted, the mortality was nine and one-nineteenth per cent.; if there be deducted those who died from accident, and in consequence of incurable chronic disorders, the proportion would be six per cent. He also details at some length his mode of treatment in fevers. In intermittents occurring in the spring, he used bleeding and general evacuants; in those of the autumn, emetics; and afterwards sulphate of quinine. He divides continued fevers into three classes: those of the sanguine system, (synocha,) of the gastro hepatic system, (bilious,) and of the nervoso cephalic, (nervous;) the first class he treated by venesection, the use of tartar emetic, digitalis, purgatives, and contra-stimulant drinks, the second class were treated by general bleeding, leeches to the hypochondrium, purgatives, and acid drinks—his treatment in the third class is not given.—*Bibl. Ital.* 1826.

79. *Baron de Ferussac's new work.*—M. DE FERUSSAC, editor of the Bulletin des Sciences has just finished a work, presenting the complete statistics of all the journals of the civilized world, from the invention of Printing to 1826, including also the learned and literary societies of all parts of the globe.—*Foreign Quarterly Review, July,* 1827.

80. *New Editions of the old Medical Writings.*—The study of the old Medical writers has of late much increased. Besides a collection of the Greek writers, began in Leipzig, in 1821, and which has reached its 16th volume, a society in Paris has undertaken a similar enterprize, but embracing a wider range,

as it not only includes the Greek and Latin authors, but also the Arabic, those classed under the denomination *Latino-barbari,* and a selection of the principal modern works which have been written in Latin; the whole to form a collection of one hundred volumes.—*Ibid.*

81. *Anatomical Cabinet of the University of Moscow.*—The rich anatomical cabinet which the deceased Emperor Alexander purchased of the Privy counsellor Professor Lodor, for ten thousand roubles, belongs now to the University of Moscow.—*Ibid.*

82. *On the changes which the laws of Mortality have undergone in Europe within the last half century, or from* 1775 *to* 1825. By M. Benoiston De Chateauneuf.—According to the calculations of several philosophers, who investigated the laws of mortality, and the probabilities of the duration of life during the last century, the following facts have been considered as sufficiently established:—

"1st. In a growing generation, the half died in the first 10 years of existence, and even sooner.

"2d. Three-fourths had perished before fifty years, and four-fifths at 60; or, in other words, of 100 individuals, 15 only arrived at this age.

"3d. From 80 to 100 years, none remained: a whole generation had run its course.

"4th. The general proportion of deaths was determined to be as 1 to 32, and that of births as 1 to 28.

"5th. It was reckoned that there was 1 marriage in 110, or 115 individuals, and that the degree of fecundity was pretty accurately represented by 4 children for each couple, although at the same time, this, as well as all the other relations, was liable to vary according to the places. In Spain and Italy, there were only 2 children from each marriage; in France and Russia 4; from 6 to 8 in Germany, and from 8 to 11 in Sweden."

Such were the laws to which the course of human life in Europe were subjected about half a century ago. Since then facts have increased and become more accurate—great political changes have taken place—civilization and the arts of industry have advanced with rapity; and it is interesting to examine what has been their influence upon human life.

"At the present period, 1825, of a certain number of children born in Europe there dies, in the first 10 years, 38.3 in 100, in place of 49.9 which formerly died.

"From birth tc 50 years, 74.2 were found to be extinct. At present the proportion of dead to living, in the same period of time is not more than 66.

"Lastly, 23 persons in 100 now arrive at 60, in place of 18 who attained that age half a century ago.

"These proportions are mean terms; taken separately they become still more favourable. Thus in France the proportion of those who survive at 60 years is 24.3 in the 100, while formerly it did not exceed 14.7.

"These results, sufficiently remarkable of themselves, gave rise to others which are not less so.

"From the 40th degree of latitude to the 65th, that is to say, upon a line which extends from Lisbon to Stockholm, embracing an extent of about 1000 leagues, and in a population of 65,000,000 of individuals which is comprehended by Portugal, the kingdom of Naples, France, England, Prussia, Denmark, and Sweden, the proportion of deaths is 1 in 40.3, that of births 1 in 30.1; that of marriages 1 in 123.3; and the fecundity, 4 children by each marriage.

"On comparing these relations with those of the last century, we are struck with the difference which exists in the actual mortality of early life at these two periods, a difference which is not less than between 38 and 150.

"This difference would itself suffice to attest the happy effects of vaccination, to which they are partly owing; but it also proves a great amelioration with respect to the cares bestowed on childhood; and those cares themselves indicate a greater prosperity and an improved condition in families. If we now reflect that it was especially in the lower classes that the mortality of children was enormous, we may conclude, that if these classes loose fewer at the present day, it is because they are in a better state for taking care of them, and bringing them up.

"Nor is it less evident also, that if these same causes, as well as some others, had not extended their influence beyond the years of childhood, they would only have had the melancholy advantage of delivering over to death a greater number of victims in the stages which follow. The contrary, however, takes place, and at the present day more individuals attain the 50 and 60th year than formerly. The action of these preserving causes of childhood must therefore continue to operate upon the grown up person during the remaining part of his career; and these preserving causes are an improved state of society.

"Marriages were formerly in the proportion of 1 in 110 individuals; they are now in that of 1 to 123. This, which is a mean term, is even too high for some countries. In France, where according to the calculations of Necker, there was 1 marriage in 111 individuals, there is only reckoned 1 in 135.

"The natural consequence of the diminution of marriages is that of births. This diminution is always proportional to the increase of the population; for while the proportion of marriages to it has fallen from 110 to 123, and that of births from 28 to 30, it is yet remarked that the one and the other are augmented in a certain degree.

"The fecundity would appear to have remained the same. In the present century, as in the last, the numerical expression which represents it is always four children for each marriage. But this proportion is undoubtedly not the true one, since we are obliged to include among the births that of the illegitimate children from the defect of proper distinctions in the accounts of births, especially in foreign countries. In France, the exact proportion of births to marriages is 3.9.

"The marriages as well as births have diminished in Europe within these 50 years, and yet the population is seen to increase. This apparent contradiction is explained by another fact, the very great diminution of the proportion of deaths. There was formerly 1 death in 32 individuals, there is at present 1 in 40.3. This diminution of the mortality bears chiefly upon the earlier stages of life. There are, on the one hand, more newly-born individuals that survive, and on the other more adults that grow old.

"The necessary result of this latter state of things, is the prolongation of the middle period of life, which appears in fact to extend beyond the limits within which it was formerly confined.

"From all that has been stated, it would appear that the laws of mortality, such as they were established 50 years ago, have since that period undergone the following modifications:

Mortality of the Different Ages.

	Old State.	New State.
From birth to the age of 10,	50 in 100	38.3 in 100
50,	74.4	66.0
60,	82.0	77.0
Proportion of		
deaths,	1 : 32.2	1 : 40.3
births,	1 : 27.7	1 : 30.1
marriages,	1 : 110.4	1 : 123.3
Fecundity,	4.0	4.0

"This table, without doubt, contains errors, owing to the incorrectness of several of the accounts given."

The following is the state of the population of France, such as it was at the time of Necker, in 1780, and such as it is at the present day in 1825, according to the Annuaire du Bureau des longitudes for the year 1826.

	Old State in 10 years. Population. 24,800,000 inhabitants.	New State in 7 years. Population. 39,400,000 inhabitants.
Deaths,	818.490	261.230
Births,	963.200	957.970
Marriages,	213.770	224.570
Natural Children,	20.480 (1-47)	65.760 (1-14)

Mortality at Different Ages.

	Old State in 10 years.	New State in 7 years.
From birth to the age of 10,	50.9 in 100	43.8 in 100
50,	74.4	67.5
60,	81.0	75.6
Proportion of deaths,	1 : 30.2	1 : 39.9
births,	1 : 25.7	1 : 31.7
marriages,	1 : 111.3	1 : 135.3
Fecundity,	4.4	3.9

Edinburgh New Philosophical Journal, Oct. 1826."

Since the above summary of M. Benoiston de Chateauneuf's memoir was written, we have received the first number of the *Foreign Quarterly Review*, which contains a notice of a work, published last year in Paris, entitled "Discours sur les Améliorations Progressives de la Santé Publique par l'influence de la Civilization. Par F. Berard." From this review we will present some additional particulars respecting the influence of civilization on public health.

"Life and health are not absolute and stationary quantities, but variable, and their variation depends upon a number of circumstances—on proper nourishment—on clothing—on fit habitation, as protection from the elements—and on mental and personal tranquillity; all these are best acquired and best ensured by civilization, and most uncertain under barbarism, or if that phrase pleases better, under a state of nature."

"Whenever we find man near that state of nature which is so largely expatiated on, and so ardently desired, in the dreams of Rousseau and Monboddo, we invariably observe him surrounded by circumstances unfavourable to existence, and debased in mind while he is weakened in frame. If we turn to the relation of any newly discovered country, we find that the face of the land is darkened by immense tracts of forest: large masses of water stagnate on the earth, the very air is filled with noxious and pestilent vapours, ferocious and venomous animals abound, and the poor savage in his boasted state of nature, is like a straw in the whirlpool; the want of means to combat against the evils which surround him never fails to weaken the vital forces, so that longevity amid savage nations is not only rare, but savages in general are more feeble than civilized nations. Le Père Fauque, who lived much among them, says he scarcely saw an old man; Raynal asserts the same of the savages of Canada; Cook and La Perouse of those of the north-west coast of America; Mungo Park of the Negroes; and Bruce of the Abyssinians."

"Will it be said then that civilization is a cause of degeneracy; and that those means which alone provide the body with constant and suitable food and clothing—which convert marshes into pasturage, forests into fields—which purify the air and remove all that is noxious in the vegetable and animal kingdoms, while they foster all which is good for man—that the means which effect these are the very causes of disease and death, of degeneracy of frame and imbecility of mind? They who are willing to adopt this creed, must, if consistent, prefer ancient Gaul to fertile France—Britain in the times of Cæsar and Agricola to England in our own—modern Egypt to Egypt the mother of science, and abounding in wealth and fertility. It is not Egypt only which may be adduced as an illustrious example of our argument, that population, and consequently health, is increased by civilization, and that with barbarism depopulation invariably takes place; modern Greece, with its islands, Asia Minor, and Spain, are no less striking proofs. In the sixteenth century, in the time of Ferdinand and Isabella, Spain was the very model of Europe. Her soil was rich, her sons proverbially chivalrous, her language was the language of courts; commerce and the arts flourished, and her population amounted to twenty-four millions. (*Robertson's Charles Vth.*) From that period may be dated the commencement of her degeneration; she has now become the most barbarous power in Europe, with a population of ten millions at most.

"On the other hand, her neighbours have been progressively advancing in civilization, and they present therefore a progressive scale in the advance of population.

"In 1688 the population of England was	5,300,000
1792 - - - - - -	8,678,000
1803 - - - - - -	9,168,000
1822 - - - - - -	12,340,000

a population considerably more than doubled in the space of 134 years."

"1700 the rate of mortality in *London*, was	1 in 35
1801 and till now	1 in 38

a benefit therefore of thirteen individuals, or one-half.

"The rate for *Great Britain* was,

From 1785 to 1789 - - - - -	1 in 43.6
1790 to 1794 - - - - -	1 in 44.7
1795 to 1799 - - - - -	1 in 46.5
1800 to 1804 - - - -	1 in 47.4

"For *England*,

In 1780 - - -	1 in 40	In 1800 - - -	1 in 47
1790 - - -	1 in 45	1810 - - -	1 in 50

so that in the short space of thirty years the mortality for England has been diminished one-fourth; a prodigious result, which can only be accounted for by the rapid strides the country has made, and is still making, in civilization. *Berard*, p. 49, (*quoted from Heberden.*)

"In the first half of the eighteenth century the proportion of deaths to births in *London* was as 3 to 2; in the last half as 5 to 4; and since 1800 the number of deaths is less than that of births as 12 to 15.—(*Berard*, p. 49.)

"In *Sweden*, the mean mortality of twenty years, from 1775, to 1795, was 1 in 37, instead of 1 in 35, as in the twenty years preceding. During this period the births did not increase—it follows, therefore, that individual life had become longer.—(*Berard*, p. 50.)

"In *France*, in 1780, the deaths annually were 1 in 30; during the eight years from 1817 to 1824, 1 in 40, nearly one-fourth less. From the census of the population which was taken in 1817, it appears that the average annual difference between the deaths and the births for these eight years, is nearly 200,000 in favour of the latter. Nothing can be a stronger proof of the favourable change in the law of mortality which has taken place in France.

"On the whole, then, it may be said, that one of the main causes of difference in population among nations is the difference in civilization; and it is a curious confirmation of the fact, that in European nations the mortality is greatest in those classes of society which are the poorest, and which therefore approach nearest to the state of uncivilized people in barbarous countries."

Dr. Villermé, in several memoirs on the relative mortality of the wealthy and indigent classes, at Paris, has stated some interesting facts respecting the relative mortality of the twelve arrondissements of Paris. The mortality in the different arrondissements varies from 1 in 43, (the mortality in the 12th arrondissement;) to 1 in 62, (the mortality in the 2d arrondissement.) This difference in the ratio of their mortality, was attempted to be accounted for by the local influences—by their water—by the density of their population; none of these would, however, explain the circumstance. Dr. Villermé then tried if it could be accounted for by their comparative indigence, and he found that by arranging the districts in one column, in the order of their mortality, and in a second, in the order of their poverty, that the order in the two columns, with one single exception, was the same; the mortality being greatest in the poorest.

"Among barbarous nations and the poor of civilized ones, acute diseases produce the mortality. Among the better classes of civilized nations, chronic maladies abound. There is one appalling fact which we must adduce in support of our assertion, that mortality is greatest among those who suffer the greatest privations, we allude to the mortality among slaves. In America, it was observed that a very large importation of slaves speedily required renewal, so much did the deaths predominate over the births. According to Hufeland, 'Art of Prolonging Life,' p. 165, one-sixth of the negroes perished in the West Indies annually, 'a result which is only paralleled,' he adds, 'by the ravages of the most inveterate pestilence.' The births among the *free negroes* of Martinique and Guadaloupe were four in a hundred, among the *slaves* two in a hundred."

The exercise of intellect, and a due activity in the functions of the brain, tends greatly to procure sound health and quiet days. "Hufeland in the work already cited, says, there is no instance of longevity in a professed idler. The truth is, that he who is occupied on subjects requiring thought, has not leisure to be intemperate. But independent of the protection which mental occupation gives against excess of all sorts, still there is much truth in the assertion, 'qu'on meurt de bêtise.' From all consistent analogy we must infer that the most important organ of the body, the brain, must have a great influence in the vitality of the frame. If any other organ ceases to perform its function, it immediately decays, and the constitution sympathises more or less with the local injury; if a limb is not used the muscles shrink and the bone becomes soft; so that no axiom in physiology is clearer, than that the performance of the function of an organ is necessary to the health of that organ. So much for the theory of the thing. But facts show that they who have exercised their brains have usually attained to a good old age. Of one hundred and fifty-two *savans* taken at hazard, one half from the Academy of Belles Lettres, the other from that of Sciences of Paris, it was found that the sum of years lived among them was 10,511, or about sixty-nine years to each man. And M. Brunaud has shown, in his 'Hygiène des gens des lettres,' that literary men have, in all climates and times, usually been long-lived."

AMERICAN INTELLIGENCE.

Case of Hydatids of the Uterus, successfully treated by the Ergot, by W. D. Macgill, M. D. *of Hagerstown, Maryland, communicated in a letter from* Mr. J. W. Anderson, to Dr. Dewees.—"I take the liberty of writing to you, to state, though not very minutely, the result of a case of hydatids of the uterus which came under the observation and treatment of my much respected preceptor, Dr. W. D. Macgill, of this place. And I the more readily communicate this case to you, as you have expressed your intention of making use of the remedy which was employed in this instance, if an opportunity presented itself. It therefore gives me much pleasure in writing this letter, which I flatter myself will not be unacceptable, as it so completely confirms, as far as one case can do, your sentiments in regard to the treatment of this disease.

"Early last spring Dr. M. was called to see Mrs. W. aged forty years, who had previously enjoyed good health, and had been the mother of several healthy children. She was labouring under a very painful affection of the womb, accompanied with periodical hæmorrhagy, occurring once in twenty-four hours, usually in the evening, accompanied with febrile symptoms, and much disturbance of the digestive functions; and which was evidently making rapid inroads upon her constitution. During its further continuance her stomach became exceedingly irritable, so much so indeed as scarcely to retain nourishment of any description. Dr. M. addressed his remedies principally to the restraining the hæmorrhagy, and obviating the excessive weakness of the stomach. But notwithstanding the symptoms continued to increase in violence, so much so as to endanger the life of the patient. She had become very much exhausted by the repeated loss of blood, and inability to take nourishment, (for she had now suffered for more than three months,) when the doctor made an examination, per vaginam, (after having made them frequently before without any satisfactory result,) and discovered something protruding through the os uteri, which he extracted, and found that the poor woman was labouring under hydatids of the womb. He immediately sent for the *ergot*, judging from analogy that it would prove decidedly effectual in producing an expulsion of the heterogeneous mass. The event proved that he was not mistaken in his conjecture, for he had given the ergot but a very few minutes when it began to show its specific operation upon the uterus, and soon ended in a complete evacuation of its contents. The mass of hydatids equalled in size the head of a large child at birth, and afforded a very good specimen of the disease, a part of which we have made a preparation of. The representation in your book on the "Diseases of women," is admirable. The floodings immediately ceased, and did not return. The woman rapidly recovered, until she has at length attained her former health and vigor, and I believe she is again pregnant. She says her mother died of a disease exactly similar.

"P. S. Dr. Macgill had not heard of your suggestion until after the delivery. He was led to the employment of the ergot solely from analogy."

[The above case is highly interesting, as the remedy employed was entirely successful in this most distressing complaint. I feel much indebted to the ingenious young gentleman who has favoured me with it, and beg his acceptance of my thanks. The allusion above is to what I had suggested in my treatise on the diseases of females, when speaking of the hydatids of the uterus.*

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* I observe, "we would propose, and we think with a fair prospect of success, the free use of the secale cornutum in this complaint, to procure the expulsion of the Hydatids; especially in such cases as would not freey admit the hand; or where the contractions of the uterus were too feeble, or insufficient for their expulsion." p. 299.

I there proposed the use of the "ergot;" the remedy which proved so successful in the hands of Dr. Macgill in the case just related. It is true, this is but a single case; and may not be thought sufficient to establish the general usefulness of the remedy in the disease in question; this is granted; but there must be a first case for the trial of every new remedy; and in a disease like that of uterine hydatids, it holds out a strong inducement to repeat the "ergot;" especially as the disease but rarely occurs, and hitherto has been without remedy, though spontaneous cures may have taken place.

W. P. D.]

Note of a Case of Fustula in the Lumbar Region, communicating with the Bladder. By L. Proudfoot, M. D.—E. D. aged twenty-four, applied to me on the 16th of March, 1827, on account of a fistulous opening which he had in the left lumbar region; upon examination with an elastic bougie, I found it entered about three inches straight forward, then taking a direction upwards, to the extent of eight inches, being within the parietes of the abdomen.

Mr. D. dates the commencement of the disease from a violent wrench which he received at sea, while handing a topsail. This was immediately followed by a discharge of bloody urine and great prostration of strength, for several days.

I commenced the treatment, by introducing a seton opposite the opening, and injecting a solution of sulphas cupri of three grains to the ounce of water, internally; I prescribed the murias hyd. eight grains, dissolved in eight ounces of brandy; under this treatment his general health was much improved, and decidedly beneficial effects resulted from the injection, which was repeated every third day, the only uneasy sensation he felt, was a slight pain in the left groin. About a fortnight after his application to me, he passed a considerable part of the injection from his bladder, which was followed by a discharge of wind from the urethra—this continued for several days, with a small discharge of urine from the opening in his back, particularly after getting up in the morning—he omitted taking the murias hyd. and I gave him the bals. copaiba in the dose of a tea-spoonful three times a day. Different injections were now employed—the black, yellow, and white wash were used, without any sensible difference in the depth of the opening.

The novelty of the case induced me to show it to my former preceptor and much esteemed friend, Dr. Mott, who strenuously recommended the use of the oleum terebinth.

About the beginning of October, I injected nearly two fluid drachms of the oleum terebinth. which soon after was voided by the bladder, with some discharge of flatus; since that time a great alteration has taken place, the depth of the fistula is at present about three inches, and the prospect of a recovery is now very flattering—the seton wore through the integuments in about three months, and the discharge from the opening has throughout the whole course of the disease appeared perfectly healthy.

The injection was thrown to the top of the fistula by means of an elastic bottle, and a small catheter.

Notice of a Case of Irritation of the Tarsi, caused by Pediculus Pubis. By J. D. Godman, M. D.—A short time since I was politely invited by my friend Dr. Vanderburgh, of New York, to see the following singular case, which he has permitted me to make use of in this way. A child of four or five years of age, belonging to a very respectable family, was observed to be suffering under apparent inflammation of the edges of the eyelids, though in every other respect healthy. The redness seemed remarkably superficial, yet was attended by a very peculiar degree of irritation. The edges of the tarsi appeared as if covered with fine red sand; and on examining the eyelids attentively with a magnifying glass, these grains were perceived to be in motion, and actually proved to be crab-lice, (pediculus pubis.) The roots of the eye lashes were literally loaded with them; the irritation was of course readily explained, and as easily removed by the use of some mercurial ointment. What rendered this circumstance more singular, was that on the most careful examination of the eyebrows and other parts of the head, no trace of these parasites could be found. From the respectability of the family, and the attention bestowed upon the cleanliness and comfort of the children, no such source of irritation to the eyes of the children could have been suspected. Both eyes were in the same condition, and examined at the ordinary distance with the naked eye, looked as if affected with an inflammation of the tarsi.

Case of voluntary Dislocation of the Os Humeri. By George F. Lehman, M. D.—On the 8th of August, 1821, I was requested to visit a sailor on board the brig Commodore Perry, Captain Barclay, who had luxated his shoulder.

Upon inquiry, I ascertained that it happened while he was engaged lifting the side of a bag of coffee, weighing perhaps one hundred and twenty pounds.

The luxation was downwards and inwards. I closed my left hand, and placing it in the axilla of the side affected, took hold of the humerus above the elbow, and pressing it to his body, to my surprise the luxation was reduced.

Captain Barclay observed that he was an indolent fellow, and could dislocate his arm whenever he pleased; which he had done several times on the voyage, particularly in port, to escape work. This observation attracted my attention, and I asked the man if he could put his shoulder out of place at will. He answered in the negative; but said very slight causes had that effect, especially when he bent his body far over to raise any thing. I desired him to demonstrate what he meant. A bag of coffee, weighing one hundred pounds, was placed before him. He bent his body over it, and by elevating one-half about twelve inches from the deck, the shoulder was again dislocated. He could, also, by pulling horizontally, remove the head of the bone from its socket.

I reduced it again with the greatest ease, but required a small pad in the axilla, and moderate extension to accomplish it. I could not succeed as in the first instance. No pain whatever was created either by the luxation or reduction of the bone, and none existed during the displacement.

This person certainly had the power to luxate his os humeri at discretion, without pain or uneasiness, and no doubt he was in the habit of doing so to elude laborious employment. Twice it had been disjointed on the same voyage in the West Indies. Physicians were called to replace it, who as a matter of prudence, directed the arm to be kept in a sling, and at rest for a few days, and thus he escaped labour. Immediately after I reduced it, he went to work as if nothing had occurred.

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*Brazilian Medical Journal.**—The appearance of a medical journal in the Brazilian empire may be regarded as a happy omen, and if it be conducted upon the same liberal principles with which it has commenced, it cannot fail to be of great benefit to the medical profession of Brazil. The three first numbers, (for January, February, and March, 1827,) the only ones we have received, are filled with extracts from the journals of France and England, and with notices of recent works and improvements in medicine and surgery. The original department is at present necessarily limited, but at no distant period we may hope that the physicians of that part of the American continent will contribute their proportion to the advancement of medical science, for which they have an ample field in the investigation of the medicinal productions, and the peculiar diseases of their climate. We wish Dr. Sigaud the fullest success in his spirited and laudable exertions to diffuse professional knowledge. J. D. G.

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* O Propagador das Sciencias medicas, ou annals de medicina, chirurgia e Pharmacia; Para O Imperio do Brazil; e nagoes estrangeras, seguidos de hum Boletim especialmente consagrado as Sciencias Naturals, Zoologia, Botanica, etc. etc. Por J. F. Sigaud, Doutor em Medicina. Rio de Janeiro, 1827.

Epidemic Yellow Fever of Washington, Mississippi.—Dr. John W. Monett has published in our esteemed cotemporary, *the Western Medical and Physical Journal,* an interesting account of the epidemic yellow fever which occurred in Washington, Mississippi, in the autumn of 1825. We extract the following details.

"Washington is an inland town, six miles east of Natchez, containing about two hundred and fifty inhabitants proper, previously to the present epidemic, of whom nearly one-half were blacks. It is situated upon an elevated site, naturally well supplied with drains: the soil is alluvial, and like all the surrounding country, is very uneven, or rather abruptly undulating; so that no marshes are to be found nearer than the Mississippi, which is six miles distant. The town covers a large extent of ground, for the number of its inhabitants, the buildings being thinly scattered, principally on one street, which is near a mile in length. There are to be found in it none of those sources and collections of filth, which are so frequently met with in cities and large commercial towns; but the general appearance is that of a pleasant and cleanly country village.

"This place has generally been noted for the excellent health enjoyed by its inhabitants; and it has been a principal resort for safety to the citizens of Natchez, when that city has been visited by yellow fever. No case of yellow fever, so far as I have been able to learn, ever originated in Washington, previous to the autumn of 1825; not even in 1823, when Natchez was so severely visited by that disease, and when Washington was crowded with those who had fled for safety, with great quantities of merchandize. During the summer and autumn of 1825, it continued quite healthy for the season of the year, until after it had been crowded with people and goods of every description from Natchez, where yellow fever had made its appearance. The surrounding country, likewise, was unusually healthy previous to the epidemic, and remained so during the fall, notwithstanding the great mortality that prevailed in Washington and Natchez. No peculiarity of disease was observed during the summer, excepting a few cases of typhus gravior, and congestive bilious fever, which occurred in August, and the early part of September. Some cases of the same character occurred, likewise, in July, yet they were by no means more frequent than in former years.

"The spring and summer until the last of July, were agreeably diversified by showers of rain and clear weather; although the quantity of rain, which fell during that time, was less than usual, the heat was considerable, ranging, generally, between 80° and 90° of Fahrenheit. The following is the medium temperature of the atmosphere in the shade, from July 10th, to September 25th, viz.

From 10th, to 31st of July.—Medium	temperature at	5	o'clock,	A. M.	76½°
Do. do. do.	do.	4	do.	P. M.	91°
From 1st, to 31st of August.—Medium	temperature at	5	do.	A. M.	78°
Do. do. do.	do.	4	do.	P. M.	90°
From 1st, to 25th of Sept. do.	do.	5	do.	A. M.	72½°
Do. do. do.	do.	4	do.	P. M.	85½°

Five o'clock, A. M. and four o'clock P. M. being the extreme.

"During the months of August and September, the heat, although not so extreme, as in July, was oppressive, and almost without remission; and the drought was equally great, not more than two or three light showers of rain having fallen during that time. Nor, indeed, was there any material change in the weather until the 15th of October, when it became cooler, and the atmosphere appeared more humid; which state of the weather was succeeded by rains and hard frosts, about the last of October and first of November. Previous to this change, all moisture seemed to be dissipated: the dews, which here are generally heavy, ceased almost entirely, and the comparative warmth of the nights, with the small portion of moisture, which descended, was insufficient to restore the drooping vegetation from the effects of excessive heat.

"About the last of August, cases of yellow fever were reported in Natchez; and the Board of Health advised the citizens to leave the place. The consequence was, that in two or three days a great proportion of them fled, many were dispersed in the surrounding country; the merchants, principally, crowded into Washington, bringing with them all kinds of goods and groceries. Houses which before had been considered unfit for residence, and as such were abandoned, were now filled with tenants. About this time several persons died of yellow fever in Washington, who either left Natchez after they were taken, sick, or whose disease could be distinctly traced to that place.

"Ten or twelve days after the flight from Natchez, the first cases occurred which originated in Washington. The first case was that of Mr. L.'s child, which died on the sixth day after its sickness. On the next day Mrs. C. was taken sick, and died on the eighth day of her disease. On the same day three others were taken with yellow fever, of whom two died; one on the fifth and the other on the sixth day of their disease. Of these three M. and L. lived together in a house entirely isolated, and two hundred yards distant from the main street, on an elevated and clean situation. They were carpenters by trade, and during the week previous to their sickness, had been shelving rooms for the merchants from Natchez, and likewise assisting them in opening and putting up their goods: to this source they attributed their sickness. M. died on the fifth day; L. recovered. The other case, Miss P. was attributed to the admission into their house, (which consisted of but one room,) a family from Natchez, with their household furniture. Cases now began to occur, indiscriminately in every part of town, with much malignancy; insomuch that a majority of the inhabitants, together with those who had fled from Natchez, speedily left town, and retired to the surrounding country.

"At the commencement of the epidemic, negroes were supposed exempt from its influence, and indeed none of them were attacked during the first few days. After which, those of them who were exposed to its influence were occasionally attacked: but in them it was generally mild, seldom requiring blood-letting. The whole number of them attacked was fifteen, of whom three died: while the whole number of whites attacked was about one hundred, of whom forty-nine died.

"Several of those who left town on the first alarm, to avoid the disease, were afterwards attacked with it, and died in the country; some were taken as late as the ninth day after having left town, and died: I know of none attacked at a later period after exposure. Those who were removed to the country were attacked, and those who were attacked after they left town, appeared to fare no better than those who remained.

"The wind, rain, and frost, which occurred between the 15th and 28th of October, gave a check to the disease; and for several days during that time, and later, no new cases occurred. The people believing that the infection was destroyed by the cold, returned to their homes, having previously caused their houses to be well ventilated and cleansed. From October 28th until the 5th of November, the weather, during the day, was quite warm; insomuch, that people began to be apprehensive as to their safety, and not without cause: for, between the 7th and 10th of November, nine new cases occurred in those who had returned, and who had not used sufficient precaution in re-occupying their houses; of which cases five terminated fatally. Of the above nine cases, four occurred in one house; where, in the early part of the epidemic, several persons had laboured under the disease, of whom some died. In cleansing this house, the servants had neglected to wash and sun the bedding, which were incautiously used by those who returned. About the time these cases occurred, the weather set in wet and cold, and health was restored to the place, no case having appeared afterwards.

"So general had been the morbific influence in the town, that scarcely any, who remained, entirely escaped: and so fatal was the disease, that one-half of those attacked, fell victims to its violence. Of the before-mentioned number of deaths, thirty-five were inhabitants of Washington; the remainder were persons from Natchez, and the surrounding country. Hence it will be perceived that upwards of one-fourth of the whole white population of the place were swept off—a mortality unequalled !

"As to the *origin* of this fever in Washington, two different opinions are entertained and supported by their respective advocates. One is, that it originated in Natchez, and was transported to Washington, in the state of fomites in blankets, and various other articles of merchandize. The other is, that it originated in Washington, independently of Natchez.

"That yellow fever may be infectious is believed and supported by many able authorities, which shall not now be adduced; many of whom, have been long intimately conversant with it in different climates. That it may be propagated by means of *fomites*, contained in blankets and other articles, I am convinced, not only from authorities, but likewise from personal observation. And during the late epidemic, several cases fell under my observation, which to me incontestibly prove the fact: cases where the disease was produced in the country, without any exposure to town, from the blankets and bedding, used by persons who died of that disease after being removed from town. At a gentleman's two miles from Washington, two of his relations, after being removed thither, died of yellow fever. The bedding on which they had laid, by accident, were thrown together in an upper room, where they remained several days. In this place they were found by three small girls, who, for two or three days, unknown to their parents, were in the habit of going into this room to play upon the bedding. In a short time all three of those children were attacked with well marked cases of yellow fever; notwithstanding, the situation is and has been noted for its salubrity, and they had no opportunity of contracting the disease elsewhere. These were the only persons in that family who contracted the disease."

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Vicarious Urinary Discharge.—In our original department will be found a most extraordinary instance of this kind—the only case which bears much resemblance to it that we recollect having seen an account of, is the one related by Dr. Senter, in the first volume of the transactions of the College of Physicians of Philadelphia. As that work has had but a small circulation, the following condensed account of the case will no doubt be interesting.

Lucy Foster, a servant maid, æt. fifteen, fleshy and healthy looking, commenced to menstruate at the age of thirteen; and continued regular until about the latter end of May, 1785, at which period the menses not appearing, and being exposed and negligent of her health, her mother supposed she had taken cold. On the 1st of June she was attacked with pain in her left hypochondrium, with cough, fever, oppression at her breast, with dyspnœa, and great irritability of the stomach. About the middle of July she vomited a quantity of bloody pus. She had a suppression of urine for twenty-four hours, which was relieved spontaneously.

In about two months she had recovered so far as to be able to return to her usual occupation, her menses returned, and continued well until June, 1786, when her old complaints, with the exception of the suppression of the menses returned with greater severity than before. The irritability of her stomach was so great that she rejected almost every article of nourishment or medicine that was given her. Opium afforded the most permanent relief.

"On the second of July she was seized with a total suppression of urine, without any perceptible cause, which continued five days."

The beginning of the sixth day she was taken with a vomiting, and she brought up water, which she said tasted in every respect like urine. "As her vomiting continued, she found relief in the bottom of her belly, from the swelling and great soreness she had felt for several days.

"She now thought herself much better, but her vomiting recurred the next day, and continued more or less every day till the 14th of the month."

As she had discharged from her stomach every thing she ate or drank, from the time of her first vomiting, she did not suffer so much from the Ischury, as she did before the first evacuation. Dr. Senter prevailed upon her to let him pass the catheter into the bladder, whence he drew about three pints of urine, clear, but high-coloured; her strength was very much exhausted, and she felt great heat and soreness throughout the abdominal viscera.

For ten weeks successively, she was incapable of retaining in her stomach any thing except opium.

From this time to December, she continued with very little abatement of her distress. And as she could lie in no other position, she was constantly supported in an armed chair, in a reclined posture, with pillows under her hips.

"Whenever I omitted to draw off her water once in thirty or thirty-six hours at farthest, she never failed to vomit it up. To ascertain so extraordinary a fact beyond the possibility of a mistake on my part, or a deception on hers, I often visited her about the time I knew she must vomit if the catheter was not introduced; and I examined her bladder, found it full, hard, and tender; and sat by her till the vomiting recurred, saved the water that she brought up this way, and compared it with that I drew off, and found it the same in every respect.

"In the month of January, 1787, from some cause unknown she could not be relieved with the instrument, nor could she vomit up her urine for several days; when it passed off by the *navel*, for three days successively, after which, the catheter was used with the same effect as before.

"About the beginning of August, a *brick-coloured gravel* began to pass off through the catheter, and soon became so large and plentiful that neither urine nor gravel could be completely evacuated by the instrument in its usual form.

"She continued to discharge gravel this way, whenever her urine was drawn off, till the beginning of November, at which time she felt more distress than usual, whenever her urine came off by vomiting, and she soon observed a *gritty substance* in her mouth. When I was informed of this new phenomenon, I requested her to save the urine for my inspection, the next time she vomited. I compared this with what I drew off, and found it contained the same kind of *gravel* as that which passed the catheter.

"From this period to the summer 1788, her complaints continued much the same. When her water was not drawn off she always brought it up by vomiting; commonly attended with great pain in the head. The *hypogastrium* now became more tumid and tender, and her bladder appeared very much thickened and extremely sore, even after it was evacuated. Add to this, the apparent inequality of the surface of the bladder, was so great, and the tumour shifting sometimes towards the right, and at others to the left inguen, according as her body was moved, that I began strongly to suspect a stone.

"Through the month of September, her urine could very rarely be drawn off; for upon the introduction of the catheter, a spasm seized the urethra and neck of the bladder, and though the instrument appeared to pass high up into the fundus of the bladder, not more than a gill could be drawn, before it stopped entirely, with a sensation of something falling down against its cervix, which she was very confident was a *stone*.

"In the course of this month she vomited more sand than she had at any time before, and failed in strength and spirits so fast, that I was apprehensive she would not live the month out. Her urethra, bladder, and external genital parts were so extremely sore, that for some time, it prevented my searching her for the stone in the manner I intended.

"About the beginning of October, I was able to introduce the sound, when I readily met with a stone, which appeared of a small size, and rather softer than urinary calculi commonly are. I repeated the examination a number of times, till I was perfectly satisfied that this was the case.

"During the remainder of the fall, and principal part of the winter ensuing, the same troublesome sensation of the falling down of a stone in the bladder, upon the use of the catheter, continued, and induced the most excruciating pain and misery imaginable.

"Her bowels, for the most part, were much less constipated than could have been expected, considering the frequency of vomiting, her supine situation, and the little nourishment she was able to retain upon her stomach: and during the whole of her disease, till within three months of her death, the catamenia were irregular. Sometimes they appeared every fortnight, and at others, she passed the regular period for that evacuation two or three months, without having any; but it did not appear to me that her disease was much influenced by either.

"Early in the spring, 1789, her urine began to pass *per anum*, loaded with the same kind of gravel that had come away by the catheter. This gave her some respite with respect to her vomiting, though she continued to throw up more or less urine as well as gravel that way every week.

"This new course of her water gave her a very troublesome *tenesmus;* but the stone in the bladder, as well as the pain and disagreeableness arising from the sensation of its descent, became daily less fatiguing. Her strength and spirits decayed fast, and the fever that she had before continually laboured under, grew more completely hectical.

"After the 13th of May, her bladder never became so much distended with urine as it had been before; and both this and the gravel, now generally passed her once in twenty-four hours, either by vomiting or purging. She, however, introduced the catheter herself, and sometimes drew off her urine to the quantity of a gill.

"The secretion of urine, as well as the formation of calculi, evidently diminished, in proportion to her loss of strength, and the increase of the diarrhœa. The menses entirely ceased.

"During the latter part of spring and summer, she became quite paralytic at times; the frequency of vomiting increased, and she had several convulsion fits after vomiting. She grew more and more emaciated; her convulsions returned more frequently; her fever was more putrid; she at last became lethargic, and on the 11th of August, death, which she had long and ardently wished for, put a period to a series of the most complicated and singular misery that I have ever seen since my acquaintance with disease."

The day after death Dr. Senter examined the body in the presence of Drs. Waterhouse and Mason.

"*Thorax.*—In this cavity there was nothing appeared unnatural, except a considerable adhesion of the right lobe of the lungs to the pleura. *Abdomen.*—The omentum was principally wasted, but not more than is commonly the case with those who die tabid. It was, however, of a dark gangrenous colour pretty generally. *Stomach.*—This appeared very much changed from its natural colour, and in a gangrenous state, containing a semi-purulent matter of a fœtid scent. *Liver and Gall bladder.*—There were no preternatural adhesions of the former, nor gall stones in the latter; and their colour, &c. not unusual. *Intestines.*—In these there were no ruptures either of their muscular coats, blood-vessels, or lymphatics, that we could discover. The villous coat was much destroyed, and the colour of the intestines darker than is common, except the *duodenum*, which was very much discoloured with the bile. *Kidneys and Ureters.*—In these there was no considerable deviation from a state of soundness; they were lax or flabby, but no rupture of any of their vessels, or any calculi discoverable. *Urinary Bladder.*—This was in its natural situation, not the least thickened, had no sand or gravel in it, nor did it adhere preternaturally to any of the circumjacent parts; and the muscular sphincter of its neck yielded readily to the introduction of the finger from the bladder into the urethra. *Uterus.*—In its cavity was contained about a drachm of thick, darkish, fœtid pus; but no other appearance of disease in its body. *Tubæ Fallopianæ.*—Were larger than common in virgins, and strung with several *hydatids* or *vesiculæ*, the size of a walnut, filled with a watery glutinous humour. *Corpora Fimbriata.*—Had a gangrenous appearance. *Ovaria.*—Were enlarged to the size of a small hen's egg, and contained a considerable quantity of a clear limpid fluid immediately under the first coat."

Secret Remedies.—We have read with great satisfaction the "Reports of the Medical Society of the City of New York, on Nostrums or Secret Remedies." The first article noticed is CHAMBERS' *remedy for intemperance.*—Drs. HAMERSLEY, DRAKE, MANLY, WATTS, IVES, and JOHNSON, the highly respectable committee to whom this subject was referred, inform us that they employed Dr. G. Chilton, an able and experienced chemist to analyze the medicine, and that the results of his experiments show it to be composed of tartar emetic, capsicum, sulphur, carbon, cochineal, and gum. "If any doubt," say the committee, "could rest upon this result to which the analysis leads, it could not fail to be removed by the collateral evidences which may be brought in confirmation from its exhibition both internally and externally—its effects upon the stomach and bowels are precisely those which ought to be expected from tartar emetic, and externally applied it will produce the pustular eruption which is peculiar to this metallic salt." This medicine then owes any efficacy it may possess to the tartar emetic which it contains—of its value, therefore, as a remedy for intemperance, or of the danger of fatal consequences resulting in some cases from its exhibition, we need not here speak—every professional man will know how to estimate it.

The second report is on LEROY's *Médecin Curative;* as this remedy, however, is rarely used in this country, we shall merely remark, that the researches of the committee show that it is composed of articles which produce the most drastic purgative, and also powerful emetic effects.

The third report is drawn up by Drs. Pascalis, Hamersley, Drake, Manly, and Watts, and is on SWAIM's *Panacea,* and the other *depurative syrups*—the *Columbian Syrup,* PARKER's *Vegetable Panacea,* POTTER's *Catholicon,* SHINN's *Panacea,* SCOTT's *Panacea,* WILSON's *Panacea,* &c. all of them essentially the same. This report displays great ability and research, and is the most interesting of the three, from the extent of the evil which was the subject of investigation. It appears, (vide Report, page 34,) that about the year 1811, Dr. Berger, the elder, was joined in consultation with several physicians of New York, in the case of a gentleman labouring under a loathsome complication of disease, the sequelæ of *syphilis,* and the repeated and irregular use of mercury, which had resisted all the ordinary modes of treatment, and at his, (Dr. Berger's) suggestion, the rob of Laffecteur was given, and with good effects. "The remarkable recovery of this gentleman, and the difficulty of obtaining an adequate supply of the rob for extensive use, owing to the restrictions that at that time existed on our commercial intercourse with Europe, led Dr. McNeven, who was one of the physicians in the consultation, to give publicity to its composition and its worth. He accordingly published in the third volume of the Medical and Philosophical Journal and Review, the recipe of M. Allion, a French chymist, for its preparation. The remedy prepared according to this recipe, with the exception of substituting the bark of sassafras, or the shavings of guaiacum for the marsh reed-grass, was soon after employed by several of our city practitioners, with the usual happy results. Among many patients, Mr. SWAIM, then a book-binder living in this city, experienced its beneficial effects *in his own person,* and soon after succeeded in obtaining from Dr. N. J. Quackinboss, the practitioner who had administered it to him, the recipe for its formation, and the directions for its employment: whereupon he removed to Philadelphia. and set forth his vegetable syrup, which he denominates Swaim's Panacea, for the treatment of those diseases for which the rob has been so long celebrated. In the first instance, Mr. Swaim's directions for using his panacea, for preparing the sarsaparilla ptisan, and the quantity and times of taking it, in conjunction with the syrup, were the same, nearly verbatim, as those given by Dr. McNeven, in the publication above referred to, for the use of the rob; but of late he has altered his directions considerably, and has ceased to insist on the conjoined use of the sarsaparilla ptisan, even in small quantities. The flavour of the sassafras in the syrup first prepared by Swaim was very perceptible, but it is now the opinion of many, that he has substituted the leaves of the Pipsissewa, (Chimaphila corymbosa of Pursh,) for the marsh reed-grass, sassafras or guaiacum, which we think very probable. However this may be, the Syrup also contains the oil of winter-green, (ol. gaultheriæ;) for its flavour is evident both to the smell and taste. Swaim's object in this addition, is, doubtless to disguise the other materials, and to render the medicine agreeable to the taste, but it may also be a useful addition as a stimulant and carminative, obviating that loathing and disgust of the medicine, which sometimes occurs from its long-continued use."*

That the sarsaparilla in the form of a syrup or decoction, alone, and when combined with corrosive sublimate, is a very valuable remedy in several forms of disease, is known to every medical man; it has been long in familiar use by the profession—but that the last combination unless administered with discrimination and judgment, is often productive of the most fatal consequences, is equally well known, and that this must be the case must be evident to every one who is acquainted with the highly poisonous properties of the chloride of mercury.

The committee appointed by the Philadelphia Medical Society to inquire into the remedial value of the more prominent specifics now sold in Philadelphia, have been pursuing the objects of their appointment with zeal and success, and have, we are informed, collected a mass of evidence respecting the effects of Swaim's panacea,† which they will shortly lay before the public; they received documents from Drs. Chapman, Horner, Emlen, Randolph, Griffith, the Philadelphia Alms-house, &c. &c. tending to prove its inefficacy in some cases, and its injurious and even fatal effects in others.

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Sulphuric Acid as a Cure for Intemperance.—M. BRUHL CRAMER, a German physician, asserts that sulphuric acid, taken with bitters, completely eradicates the disposition to the intemperate use of ardent spirits. Dr. W. D. BRINKLE has related, in our cotemporary the *North American Medical and Surgical Journal*, several cases in which he has administered this acid, and which tend to confirm in a great measure the assertion of Dr. Cramer. Dr. Brinklé adds from one to two drachms of the acid to a pint of the favourite liquor of the patient, and orders a wine-glassful to be taken every one, two, or three hours—the interval between the doses being regulated by the quantity of liquor the patient has previously been in the habit of drinking—it is not to be taken to the extent of producing intoxication.

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Delirium Tremens.—Dr. COATES has published in the *North American Medical and Surgical Journal* for July and October last, an elaborate paper on this disease—he concludes his paper with the following summary of his views.

"1. The disease is a delirium and not a mania, and this distinction should be attended to, both for medical and legal reasons.

2. It consists in a heightened activity of the sensorium; and this appears to arise from the generation, in that organ, of an unusual vital power, which is not, as is common, exhausted by the narcotic poisons habitually used. This is not considered as an hypothesis, but the expression of a fact existing in nature.

3. The delirium may be combined with other diseases and injuries, situated in many different parts of the body.

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* Swaim, however, at least in many instances, adds the corrosive sublimate to his preparation. This is proved by the fact that profuse salivation frequently follows its use.

† Swaim continues to announce in the pamphlets accompanying his medicine, that it is employed in the Pennsylvania Hospital and Philadelphia Alms-house. This statement is incorrect. When Dr. Price, who subsequently became an agent of Swain in England, and who failed to introduce it into vogue there, was one of the attending physicians, he was accustomed to prescribe it very repeatedly; but it has not been used in that institution since Dr. Price left it.

In the Philadelphia Alms-house its use has been discontinued for several years. Dr. S. Jackson, when elected one of the physicians of that institution, introduced the syrup de Cuisinier, the compound syrup of sarsaparilla of the American Pharmacopœia, as a substitute for the panacea, and it has been continued to the present time. In the practice of the Alms-house the syrup de Cuisinier has generally proved more successful than Swaim's "Panacea," as an appropriate treatment to each particular case is usually conjoined with its exhibition. The cost to the Alms-house of the syrup de Cuisinier, is about thirty cents per bottle, instead of five dollars, the sum originally paid to Swaim, and afterwards of three, the price at which he now vends it. S. J.

4. When violent, it obscures and renders imperceptible most of the symptoms of the co-existing disease.

5. It is doubtless necessarily accompanied, as all vital excitements are, with an unusual amount of the circulation of the blood in the organ affected; and is from this cause sensibly influenced by cups, blisters, and emetics. It is not so far checked by the use of emetics as to render these advisable as a leading means of cure. It is not sufficiently under the control of the general circulation to be cured by venesection; or to be sensibly relieved by it, without such an exhaustion as is highly dangerous to life.

6. It is entirely and absolutely under the control of opium; although the fevers and other diseases which are liable to accompany it may be by no means so.

7. It admits of very large doses of opium, which are not productive, either at the time or subsequently, of any injurious consequences, provided they are not repeated after a tendency to sleep is evinced.

8. The patient must *sleep or die*. There is no alternative. Yet the physician should personally watch the effect of very large doses of opium.

9. There is no distinction of stages which need occasion a moment's delay in resorting to opium.

10. Purgatives are of no use in this delirium; but it is necessary to prevent costiveness subsequently to the administration of opium. Purgatives may be necessary for diseases which exist at the same time; but when this is the case, they are, in general, most advantageously postponed till after sleep has been obtained.

11. Gentle stimulants are frequently useful during the convalescence; but these should not resemble ardent spirits; and an excellent and sufficient one is capsicum. Nor should any ardent spirits, unless indicated by peculiar circumstance, be given during the paroxysm."

Appointment of Assistant Lecturer on the Institutes and Practice of Physic, and Clinical Medicine in the University of Pennsylvania.—Dr. SAMUEL JACKSON has been appointed assistant lecturer on the Institutes and practice of physic and clinical medicine in this university. The object of the appointment, we understand, is to allow Professor CHAPMAN to give an undivided attention to the practice of physic—leaving the institutes to be taught by his colleague. An arrangement of this nature has long been demanded, and while the scheme of medical education is thus enlarged and perfected, it involves no additional expense to the student—since Dr. Chapman, by whom the appointment has for several years been earnestly solicited, voluntarily appropriates a portion of the proceeds of his chair as a compensation to his assistant.

No selection, we believe, could be more judicous than that of Dr. Jackson, for the reputation of the school, or the general interests of medical science. He will bring to the enterprize in which he is to enter, the genius, learning, and enthusiasm by which he is eminently distinguished, and applied, as they will be, to an important department of medicine, heretofore too much neglected, cannot fail, we think, to render the most valuable services.

The Institutes and Practice of Surgery, being the Outlines of a Course of Lectures, by WILLIAM GIBSON, M. D., &c. A new edition of this work, with numerous additions, is preparing for publication—it will be ready early in November.

New Dispensatory.—Messrs. Towar and Hogan have just published an "Eclectic and General Dispensatory: Comprehending a system of Pharmacy Materia Medica, the Formulæ of the London, Edinburgh, and Dublin Pharmacopœias, prescriptions of many eminent physicians, and receipts for the most common empirical medicines: collated from the best authorities, by an American Physician." This work appears to contain in a condensed form, a very large amount of information relative to Pharmacy and the articles of the Materia Medica.

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TO READERS AND CORRESPONDENTS.

Communications have been received from Drs. **Heustis** and **Colvin**: other correspondents, who have favoured us with communications, will receive private answers.

Our friends will be pleased to learn that the success of this Journal has been most flattering; the first edition of No. I. is entirely exhausted; a new edition is now in press.

The following publications have been received:—

Annales de la Médecine Physiologique, par F. J. V. **Broussais**, D. M. For August and September, (in exchange.)

Journal des Progrès des Sciences et Institutions Médicales en Europe, en Amérique, &c. Vols. IV. and V. (in exchange.)

The Edinburgh Medical and Surgical Journal, for October, 1827, (in exchange.)

The London Medical and Physical Journal, for October, November, and December, 1827, (in exchange.)

The London Medical Repository and Review, for October, November and December, 1827, (in exchange.)

The Medico-chirurgical Review, edited by **James Johnson**, M. D. for October, 1827, (in exchange.)

The Western Medical and Physical Journal, Original and Eclectic, for September, October, and November, 1827, (in exchange.)

North American Medical and Surgical Journal, for January, 1828, (in exchange.)

Bulletin des Sciences Medicales for June, July, and August, 1827, (in exchange.)

Revue Encyclopedique, August, September, and October, (in exchange.)

Rheumatism and some of the diseases of the heart and other internal organs: considered in the Gulstonian Lectures, read at the Royal College of Physicians, May, 1826. By **Francis Hawkins**, M. D. one of the physicians to the Middlesex Hospital. London, 1826, 8vo. pp. 144. Longman & co.

Appendix to the papers on the nerves, republished from the Royal Society's Transactions, by **Charles Bell**; containing consultations and cases illustrative of the facts announced in those papers. London, 1827, 8vo. pp. 144, pl. 1. Longman and co.

A treatise on gunshot wounds, on inflammation, erysipelas, and mortification, on injuries of nerves, and on wounds of the extremities requiring the different operations of amputation; in which the various methods of performing these operations are shown, together with their after-treatment; and containing an account of the author's successful case of amputation at the hip joint, &c. &c. &c. with five explanatory plates. Being a record of the opinions and practice of the surgical department of the British army, at the termination of the wars in Spain, Portugal, France, and the Netherlands, in 1814 and 1815. By G. J. **Guthrie**, F. R. S. surgeon to the Westminster Hospital, and the Royal Westminster Infirmary for the Eye, &c. &c. &c. Third edition. London, 1827, 8vo. pp. 559. Burgess and Hill.

NOTICE TO READERS AND CORRESPONDENTS.

Conversations on Anatomy, Physiology, and Surgery. By **Archibald Robinson**, M. D. &c Edinburgh, 1827. pp. 450, 12mo.

Observations on the Causes, Symptoms, and Treatment of Derangement of the Mind, founded on an extensive moral and medical Practice in the Treatment of Lunatics. By **Paul Slade Knight**, M. D. &c. London, 1827, pp. 167, 8vo.

Observations on the Causes and Early Symptoms and Defects in the form of the Spine, Chest, and Shoulders, and on the means of Correcting them, with Remarks on the different Methods pursued in this Country and on the Continent, in the Treatment of Distortions; being an enlarged edition of the papers lately published in the London Medical and Physical Journal. By **John Shaw**, Surgeon to Middlesex Hospital, &c. London, 1827, 8vo. pp. 130, pl. 7, and several wood cuts. Longman & Co.

A Dissertation on the Features and Treatment of Insanity: containing a Retrospect of the most important Modern Theories on the Subject, and Observations on the Inadequacy of our present knowledge of the Physiology and Pathology of the Brain, to elucidate the phenomena of Mental Derangement. By **John Syer**, Surgeon, &c. London, 1827. 8vo.

Practical Observations on the Management and Diseases of Children, by the late **Charles Thomas Haden**, Esq. with Additional Observations and a Biographical Notice of the Author. By **Thomas Alcock**, Surgeon. London, 1827. 8vo. p. 188.

An Introduction to the Comparative Anatomy of Animals; compiled with constant reference to Physiology, and elucidated by twenty plates. By **C. G. Carus**, Med. et Phil. Doct. Professor of Midwifery, &c. &c. Translated from the German by **R. T. Gore**, Member of the Royal College of Surgeons in London, 2 vols. 8vo. pp. 771—1 vol. 4to. of plates. London, 1827. Longman & Co.

The Lectures of Sir **Astley Cooper**, Bart. F. R. S. Surgeon to the King, &c. &c. on the Principles and Practice of Surgery; with additional Notes and Cases, by **Frederick Tyrrell**, Esq. Surgeon to St. Thomas's Hospital, and to the London Ophthalmic Institution, Vol. III. London, 1827. 8vo. pp. 538, 2 plates.

Introduction to the Science of the pulse, as applied to the Practice of Medicine. By **Jules Rucco**, M. D. &c. &c. London, 1827. 2 vols. post 8vo. pp. 803.

A Concise Description of the Locality of the Arteries in the Human Body. By **G. D. Dermott**, Lecturer on Anatomy and Surgery, in the Anatomical School, Little Windmill-street. London, 1827. 12mo. pp. 144. Diag. 3.

Anatomical Description of the Reflections of the Peritoneum and Pleura; with Diagrams. By **G. D. Dermott**, Lecturer on Anatomy and Surgery, &c. London, 1827. 8vo. p. 24. Diag. 5.

Saggio di Elettro-Magnetismo dedotto dagli esperimenti instituti nel gabinetto fisico della Universita' di Roma da Saverio Barlocci, Professore di Fisica Sperimentale in detta Universita' e Membro del Collegio Filisofico. Roma, 1826, pp. 74. tav. 2.

For the titles of other books received, see Bibliographical Notices.

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THE

AMERICAN JOURNAL

OF THE

MEDICAL SCIENCES.

Art. I. *On the Secale Cornutum, or Ergot.* By W. P. Dewees, M. D. Adjunct Professor of Midwifery in the University of Pennsylvania.

THE ergot has obtained throughout this country, as well as in Europe, a reputation as a powerful auxiliary in the practice of midwifery. But great diversity of opinion seems to exist, as to the precise estimation in which the article should be held; its claim being extravagantly urged by some practitioners, while by others it has been condemned as useless, and its employment even deprecated. Under these circumstances, it may be considered as not altogether uninteresting to inquire, what are its real powers; under what circumstances it is useful; and, what are the rules which should be attended to, in order to prevent any evil following its exhibition.

The action of the ergot appears to be specifically upon the uterine fibres; urging them sooner or later to more or less violent contraction. It is not the alternate contraction alone that is increased by this substance; the tonic, which is of much more value, is also powerfully augmented; since it can, in consequence of this power, be most advantageously employed, in many cases where this effect is all-important. In this respect it appears different from other stimuli, which may exert an influence upon this organ; such as opium, the oil of cinnamon, volatile alkali, &c.; or the mechanical stimulus of the forceps, vectis, or the hand.*

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* I have never witnessed any exaltation of the powers of the arterial system, or any other marked effect, (if we except its specific action,) from the exhibition of the ergot, though I have been very attentive to the subject. But it is declared by Dr. Oslere, on the authority of Dr. Erskine and others, that it slightly increases the fulness and frequency of the pulse; produces a glow

Each of the stimulants just mentioned, has been known to rouse the alternate contractions of the uterus into a temporary, and sometimes successful action; but after neither does the tonic contraction follow, with any degree of certainty; nay, we may with much truth declare, that inertia of this organ is very apt to follow their employment. Thus we witness hæmorrhage sometimes succeed the use of either of the remedies just named, though successfully exerted as regards the mere delivery. But so far as my own experience goes, or a pretty extensive inquiry will justify the declaration, I can say, that neither myself, nor such of my friends of whom I have asked the question, have ever witnessed such a consequence follow the use of the ergot.

So far then, I think we may with much confidence declare, that every other stimulus which has contributed to the energy of the uterus, except the ergot, has been followed occasionally by inertia of that organ; this fact is of high practical importance, as it leads to an almost certain mode of treating such females as may be habitually liable to floodings after delivery. It also, on the other hand, points out a caution of equal practical importance; namely, not to exhibit it, when there may be a chance that turning may be necessary; but more of this presently.

There is another peculiarity attending the action of this substance, not less remarkable, perhaps, though not equally important; namely, the promptitude of its action; for we have constantly observed, that if it do not manifest an influence in twenty minutes, or half an hour at farthest, it utterly fails. The action of this substance is generally so extremely prompt, as sometimes to create a doubt of its agency in the minds of those unaccustomed to its influence But I am quite certain, that the ergot never acts with so much efficacy as when it acts quickly; indeed I might say that its success is almost in proportion to its promptitude.* By many, this very sudden action of the uterus has been attributed to coincidence, rather than the effect of the

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over the surface; excites nausea and sometimes vomiting, and pain and giddiness of the head.—*Philadelphia Journal of the Med. and Phys. Sciences, No.* 3, *N. S.*

As far as I have been able to determine, the effects of this substance are confined to the nervous system; and through its intervention, acts specifically upon the uterus. Nor are its powers confined to the human uterus; it acts with equal and similar efficacy upon the uterus of the brute. We are told it is familiarly used near Lyons, to aid the parturient cow.

* Goupil says, " la rapidité avec la quelle le sèigle a produit son effect est réelment surprenente; elle feut être comparée á l'action de l'émétique." *Journal des Progrès, Vol. III.*

remedy. This may occasionally be the case, as we see changes similar to those effected by the ergot, take place as suddenly where none has been exhibited; but it would be unfair to declare this to be the case always.

Thus, on the 11th of November, 1827, I was called to Mrs. V. in labour with her fifth child; the waters had discharged themselves half an hour before my arrival, and the patient had experienced a number of very smart pains. After the escape of the liquor amnii, they abated both in force and frequency. On the accession of a pain I examined my patient, and found the presentation to be a first presentation, and the head arrived at the inferior strait; the mouth of the uterus was fully dilated, and every thing gave promise of a speedy delivery. But the pains became still more feeble and longer apart, and after waiting an hour and an half for their amendment without advantage, I resolved upon exhibiting the ergot; especially as my patient became clamorous for its exhibition. The ergot was accordingly sent for; the messenger had scarcely left the house, before the powers of the uterus were spontaneously roused, and with such efficacy that the child was upon the point of being born, when it arrived; it was, therefore, not given; ten minutes more were all that was necessary for the completion of the delivery. In this case, had the ergot been given, the alteration in the action of the uterus would doubtless have been attributed to it, by those unacquainted with the peculiarities of its action; yet an experienced eye and ear would readily have detected its want of efficacy, did it exert no power, as well as be able to determine its agency, if it co-operated with the newly-awakened powers of the uterus.

As regards myself, I have the most firm reliance upon the powers of the ergot. And, the character of its action is so distinctly marked, that a very little observation will enable us to detect it. Whether or not the peculiarity of the effort produced by the ergot has been observed by others, I cannot say;* it appears to be perfectly well defined and characteristic; so that I think I am always able to distinguish the cases of coincidence, from those in which the ergot was decidedly operating.

When ergot has been administered with success, we find the uterine effort not only more quickly repeated, and more powerfully exerted, but these efforts are accompanied with less suffering, than the same apparent exertions of this organ, where not urged by this drug.

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* Many speak of its specific action; or of its specific influence, but I do not recollect to have seen any account of the details, in what these specific effects consist.

The woman, when interrogated with respect to her feelings, expresses her sensations by saying she feels "as if every thing was forcing from her;" but at the same time admits, that the pains have not the same character with those she suffered before: indeed, it very frequently happens, that there is a great abatement of suffering, by converting a concentrated pain, and this most frequently in the back, to a more generally diffused one over the abdomen; or by obliging the back to participate if the abdomen has been the particular seat of it. At the same time, it must be confessed that the intervals between the contractions are more uncomfortable, as an almost constant nisus is kept up by the excited, or rather, it would seem, the goaded uterus, though the sensation does not amount to pain. Now the presence of the circumstances just noticed, constitute the peculiarity of the action of the secale cornutum.

Some of my medical friends, but they are very few indeed, declare they never have witnessed *any effect whatever from the ergot even when it has been administered in large doses.*[*] I account for this discrepancy of result, only by supposing the ergot which they employed was effete; a circumstance, I have reason to believe from experience, of no unusual occurrence.

The like want of faith in the powers of this article, seems to prevail with many respectable practitioners in Europe; and which may be accounted for, perhaps, upon the same principle. Dr. Davis, an accoucheur of deserved eminence, says that "the pretensions of the secale cornutum have been generally known to the profession for nearly twenty years; yet the actual fact of its power, has not been satisfactorily established; nor is there evidence of its having, in a single instance, superseded the necessity of using the forceps."[†] This assertion, it must be observed, is one which admits of no possible demonstration; since it would be impossible to prove, that the case in which the ergot appeared to be successful, would absolutely have required the use of the forceps, or that the cases relieved by the forceps might not, in many instances, have been successfully treated by the ergot: yet so far, I can safely aver that a number of instances have occurred, in which I believe I should have employed the forceps, previously to my acquaintance with the powers of the ergot, but which were terminated by this drug, both promptly and safely. And further; I am certain that I do not now use the forceps once, where I formerly used them ten times.

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[*] Chaussier and Madame La Chapelle, also declare they have never witnessed any effects from the ergot, in the trials they made of it, in "La maternité de Paris."

[†] Elements of Operative Midwifery.

And the reason of this abatement in the employment of the forceps, may I think, be justly attributed to the almost universal use of the ergot, by every kind of practitioner of midwifery; and hence I presume, that the secale cornutum, now achieves deliveries, that would have required the forceps formerly; for were this not the case, I think I should be called upon as formerly, to aid the labour with these instruments.

As every thing depends upon the proper quality of the ergot, it should be kept whole in a glass bottle with a ground stopper; and only powdered, pro re nata; nor should it ever be used when it exceeds a year in age;* for the ergot, like almost every other vegetable substance, is easily acted upon by heat and moisture; and consequently, it is easily deteriorated when exposed to their influence. I have in several instances failed to produce the slightest effect with the ergot procured at one shop; whilst, that from another, in the same patient, has been as prompt, as efficacious.

I have generally administered the ergot in substance; some prefer it in infusion.† Twenty grains in a little sugar and water may be given at once; and I seldom exceed this quantity; as I have rarely found the further exhibition of it attended with better effect. My valued friend, Dr. George Holcombe, of Allentown, N. Jersey, objects very strongly to the quantity just named; and proposes much smaller doses, but more frequently repeated; or as often as it may be necessary.‡

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* We are however informed, by Lorinser, (Edinb. Med. and Surg. Journal, for Oct. 1826, p. 453,) that it preserves its powers perfectly for two years, as far as regards its operation on the stomachs of men; but whether it retains its specific powers upon the uterine fibre for that period, does not appear to have been ascertained by his experiments. On the other hand, we are directed by Goupil, (Journal des Progrès des Sciences, et Institutions, &c. vol. iii. 1827, p. 170,) in order to be certain of the peculiar properties of this substance, to use it the same year in which it has been collected; and that it must be kept in bottles hermetically sealed; and not be powdered, but as it may be wanted.

† Bordot informs us, that the old women in the department of "Cote d'or," infuse a handful of this substance in a cup of water, and give a table-spoonful of it every five minutes. This dose, Goupil observes, is much stronger than that pointed out by accoucheurs; but he says we must notice the manner in which it is taken, as it is much less active than when given in powder.—*Ib.* p. 171.

‡ See Philada. Journal of the Medical and Physical Sciences, Vol. II. N. S. p. 317.

I think I am every way right, when I say, that there is no decisive instance extant, in which the "ergot" has had a direct unfriendly influence upon the child. I am aware much has been said to the contrary, by many respectable practitioners; but I think it would be no difficult matter to show, that when a still-born child has followed the exhibition of the "ergot," it has been constantly owing to the following circumstances. First, it has been given too early; that is, long before any reasonable expectation *should have been entertained,* that delivery would soon follow its exhibition, owing to the want of relaxation in the soft parts: second, given when the head has not been well situated, and the practitioner perhaps not aware of this circumstance; consequently, making a wrong estimate of the time that must elapse before delivery could take place, after its exhibition. This latter error very commonly arises, from the facility with which the head of the child may generally be felt; or its supposed disposition to escape through the external parts, because they, as well as the uterus, are favourably disposed. No mistake is more common, among those who are ignorant of the mechanism of labour; for they suppose there is little to do; and "were the pains but *a little stronger*, the child would soon be delivered:" under this delusion the ergot is given, with the expectation of a speedy issue. But this does not take place agreeably to their hopes, and very much to their surprise; for they are altogether unable to account for its failure. Whereas, an enlightened practitioner, would instantly have detected the wrong position of the head, and would have seen at once, how much was yet to be effected before delivery could take place. He would also have been able, very nearly, to determine the time and the degree of effort it would have required to terminate the labour; and he would have withheld the ergot, until more had been done by the unaided contractions of the uterus. But the better to illustrate this fruitful source of error, we will first refer to the position of the head, when not well situated: and second, to the difficulty the head sometimes finds in undergoing these changes, even when it is well situated, and the soft parts, favourably disposed.

1st. The difficulty arising from the position. Thus, in the fourth, fifth, and sixth presentations, there may be much delay, from the forehead being sometimes obliged to come under the arch of the pubes; in the two first, probably, if not changed; and unavoidably, in the last; which circumstance may have escaped the calculation of the practitioner at the time he exhibited the ergot, or he may have been ignorant of it; consequently much unlooked for delay may ensue, and this sometimes to the injury of the child and the uterine parietes. But in this case no blame should attach to the "ergot" specifically, for the same consequences will follow from the long-continued efforts of the uterus, where none of this substance has been administered. BAUDELOCQUE gives us instances of this kind, and every practitioner of any standing must have observed the same thing. Indeed the danger to the child after the evacuation of the waters, is always in proportion to the tonic power and the continuance of the alternate contractions of the uterus; hence we have always reason to apprehend that the child will be still-born, when the uterine contractions continue very long, and with much force after the discharge of the liquor amnii: we are persuaded this is agreeable to the experience of all who practice midwifery. If this be so when no "ergot" has been administered, it may certainly, á fortiori, happen after it has been given, without any blame justly attaching to its powers. Some have carried their apprehensions of this substance so far as to declare it will produce vesications, and inflict other injuries upon the child's skin in the short time that shall elapse after its exhibition and the final termination of the labour. This is even more incomprehensible and incredible than the influence of the imagination upon the fœtus in utero, at least it should be classed with it.

2d. The difficulty the head sometimes finds in undergoing the changes necessary for its escape from the pelvis when the soft parts are well disposed.

This may arise from several causes. First, when a proper relation does not exist between the head and the pelvis, even when the head is well situated. When this happens, a long series of efforts will be required to force the posterior fontanelle to place itself under the arch of the pubes, and nothing but an enlarged experience, with an entire knowledge of the mechanism of labour will enable the practitioner to determine the quantity of force, and the lapse of time that will be required for this purpose. In this case, should the "ergot" be resorted to, it will be blamed, if the child be still-born, when it is altogether the fault of the practitioner—for in this case the "ergot" should not have been given, so long as the natural pains continued powerful; for it is not so much by multiplying the force, as by repeating its application, that the desirable end is effected. We have known the "ergot" given under these circumstances, and the uterus to become exhausted by being thus unduly urged; and the only resource ultimately has been in the forceps. Second; at other times when the posterior fontanelle has even placed itself under the arch of the pubes, it will sometimes require the long-continued and the often repeated efforts of the uterus to carry the parietal protuberances below the tubers of the ischia. Now if "ergot" be given in this case, and the child be still-born, it may be blamed, when it had no agency in the disaster.

Dr. HENRY DAVIES says, "it may be observed that in some cases, when the pelvis was a little confined, and when the head was not sufficiently low down for the application of the common forceps, the secale has been successfully used, and the child delivered with the forceps: very great discretion in these cases is required."* Dr. Davies gives several well marked instances of the influence of the ergot in feeble action of the uterus.

But certainly the most common cause of the failure of the "ergot," is owing to its injudicious and indiscriminate exhibition. It has been given we have well ascertained, before the membranes have been ruptured, the os uteri at all dilated, and the external parts quite rigid. What but defeat and injury can result from such an improper use of this powerful aider of uterine contraction? This substance is now in familiar use among midwives who have neither principles nor experience to direct its proper employment, and we are credibly informed it is used in this city by a practitioner in extensive business, in almost every case to which he is called.

This is truly the abuse of a valuable remedy; for if our information be correct, the too free use of it in this gentleman's practice has occasioned very many prolapsus uteri. This effect of the ergot may perhaps be questioned by some, but I have not the smallest doubt of the fact, from what I have seen when this medicine had been improperly taken. A lady aborted at a little beyond the fifth month, with twins. The involucra did not come away for several days after the expulsion of the embryos; and as these came off in one mass very soon after taking twenty grains of ergot in powder, the lady could not be persuaded but that one of the placentæ remained, and became very anxious for its discharge, and desired that another dose of the ergot might be given her. This I absolutely refused; but at the same time assured her in the most positive manner that nothing remained to come away. She, however, it seems was not convinced; for I had scarcely left the house before she caused another portion of the ergot to be given her. The consequences were a repetition of violent pains, and the escape of a considerable portion of the uterus through the os externum. She became now excessively alarmed, and I was sent for in haste. I found her in great agony; an agony resembling that of the last moments of labour; and upon examination the uterus was found in the situation just mentioned.

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* Medical and Physical Journal, July and August, 1825.

The uterus, owing to the constant and violent nisus created by the ergot,* was restored with some difficulty, and the pains were appeased after a while by large doses of laudanum. She was obliged to wear a pessary for a long time before the uterus recovered its position.

I am, therefore, convinced that much future injury has been sustained by giving this medicine in cases where there is little or no resistance to be overcome; for in such cases the increased efforts of the uterus, produced by the ergot, continue after the child is delivered as its impression does not immediately wear off. In this case, it took place at a time when the uterus had nothing to support or retain it within the pelvis; it must, therefore, become prolapsed if not protruded.

From what has been said, it would appear that the ergot is a powerful medicine; so powerful, indeed, that well defined rules should be laid down for its use. It would seem that it is the improper exhibition of this drug, and not any specific power, that creates the evils but too commonly charged to it; also, that there is no satisfactory evidence of its exercising any baleful effects upon the child in utero.

The following rules for the use of the ergot, if attended to, I think will prevent any evil following its exhibition.

1st. It should never be given before the membranes are ruptured, the os uteri dilated, and the external parts disposed to yield.

2d. It must not be used so long as the natural pains are efficient, and competent to the end.

3d. But should they flag, from any cause, it may be given; provided the labour be a natural labour according to our acceptation of the term "natural labour;" that is, when the head, (if well situated,) the breech, the feet, or the knees, present. For independently of any accident which may complicate the labour, it is sometimes desirable, for the safety of the child, to hasten it when the natural powers are incompetent to this end.

4th. And if the labour be accompanied by any such accident as flooding, convulsions, syncope, &c. it may sometimes be employed to great advantage, provided rules 1 and 2 are not violated.

5th. It may be used very often with much advantage in every kind of premature labour; and at full time, when the placenta is not thrown off, and the uterus is found in a state of atony.

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* This effect of the ergot has often been noticed; the impression it makes upon the nervous system remains a long time, sometimes even after this substance has been rejected from the stomach; in this respect it is like opium and some other narcotics. Desgranges assures us he has seen the ergot ejected by vomiting, and yet the delivery has gone on with equal speed and certainty.

6th. Where flooding takes place after the rupture of the membranes; the os uteri well dilated; the pains feeble, but the child well situated.

7th. Where the head of the child has been left in the uterus by being separated from its body.

8th. Where the uterus is painfully distended by coagula.

Dr. WARD, of New Jersey, recommends that the ergot should be used, "in alarming uterine hæmorrhages, which sometimes take place before delivery, whether it takes place in consequence of a detachment of some portion of the placenta, it being attached to the fundus uteri, or whether it be owing to a separation of its attachment over the orifice of the uterus." In this advice, I cannot agree with this respectable practitioner; for, in the first instance, he states there can be no advantage derived from exciting or increasing pain, unless the os uteri be well opened and the membranes protruding, that they may be easily ruptured, if this can be done with propriety;* for until the liquor amnii be expended, the hæmorrhage cannot be arrested by exciting the alternate contraction of the uterus; and the tonic, by which this discharge can alone, under such circumstances, be stopped, cannot take place until the membranes have given way.

In the second case in which Dr. Ward proposes the ergot, we apprehend it would be decidedly mischievous; as it is found that in placental presentations, the flooding is always increased by pain; as it directly tends to augment the separation of the placenta.

It may, however, be said, that in the unavoidable hæmorrhage, an advantage may be derived from the exhibition of the ergot, by hastening the labour, though it may for a short time increase the discharge. But in order that this reasoning may have any value as a practical precept, the cases in which this advantage could be derived should be extremely well defined; nothing should be left contingent in a complaint so dangerous, and which has but one successful mode of treatment, so far as we yet know; namely, the delivery of the child. Now, with these admissions, we are well disposed to receive any evidence in favour of the remedy proposed, and for the particular species of hæmorrhage in question. And, if Dr. Ward will assure us, from his own experience, that the ergot will supersede the necessity of artificial delivery, from the promptness with which it effects delivery, we will hail this substance, as one of the most valuable of our therapeutical agents; but until this is done, we shall feel a reluctance to adopt this remedy in the cases under consideration, as *reasoning* appears to be decidedly against its employment.

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* We say "if the membranes can be ruptured with propriety;" for this cannot and should not always be resorted to; for instance, it should never be done when the presentation is not natural, unless we mean to proceed immediately to artificial delivery. And if this should be deemed expedient, there can be no propriety in giving the ergot, for the less opposed we are by pain, during turning, the better. It, therefore, also follows that this substance should not be given in cases where it will be certainly necessary to turn; especially if the waters have been long drained off.

Let me be borne with a little longer, as this subject is one of high interest in every point of view; for a placental presentation is always one of great danger, even under the best management; and it is almost necessarily fatal, under bad. Do not let me be supposed, in this investigation, to substitute reasoning for facts; for the very contrary would be my wish. But until I shall be in possession of unequivocal testimony in its favour, I shall remain, at least doubtful, of the safety of employing it.

I have in so many words declared, that reasoning is against the use of the ergot in the unavoidable hæmorrhage; I will now endeavour to show this to be the case. The primary object in all cases of hæmorrhage, is to arrest the bleeding; now, in the cases in question, this is particularly necessary, if it be even temporarily; and for this purpose a variety of means are resorted to; but, this cannot be done absolutely, but by delivery. Why should delivery be the only certain remedy in this case? for several reasons; first, because a temporary suspension of the bleeding is no security against its return; as the very mechanism of labour causes the placenta to detach itself from the mouth of the uterus; and when this takes place, hæmorrhage must ensue; and this in the exact ratio to the extent of the separation. Second, this being the case, it follows, that whatever tends to increase this separation, will necessarily augment the bleeding—uterine contractions have this tendency; and the ergot is almost certain to provoke or increase uterine contraction; consequently, to increase hæmorrhage. Third, because pains may exist for some time, without the os uteri being disposed to yield; yet during the return of each pain, the hæmorrhage is increased; consequently, if the uterine contractions be increased in force or frequency by any agent whatever, and the mouth of the uterus does not dilate in the same proportion, mischief, instead of good, must be the result.

For these reasons, we are of opinion, that the ergot should not be used in cases of placental presentations, as a general practice; and if used at all, it should only be when the os uteri is well dilated, or easily dilatable. In such cases, it may be occasionally useful, by urging the uterus to brisker contractions; and thus effect the delivery of the child, as speedily, perhaps, as if turning had been resorted to; especially, if this must be attempted by the inexperienced practitioner.

The ergot may be used with a fair prospect of success, when the head of the child has been left within the cavity of the uterus after the delivery of its body, when no objection can arise from the unhealthy condition of the pelvis.

I have also derived much advantage in several cases of menorrhagia, where the long continuance of the disease, rather than the immediate excess of the quantity discharged rendered it important, it should be arrested. I have given in such cases one grain, three times a day, in the form of a pill, and continued it for some time.

It may also be useful in cases of polypi; where it shall be desirable to force these substances beyond the neck of the uterus, for the purpose of applying a ligature, or with a view to their excision. I have some time since, suggested its probable usefulness in hydatids of the uterus;* and its value in such cases has been in part realized by Dr. MACGILL.†

ART. II. *Case of Obstinate Cough, occasioned by elongation of the Uvula, in which a portion of that organ was cut off, with a description of the instrument employed for that purpose, and also for excision of scirrhous tonsils*, by PHILIP SYNG PHYSICK, M. D. Professor of Anatomy in the University of Pennsylvania. [With a plate.]

IN June last, a young lady afflicted with a very obstinate cough, applied to Dr. Physick, and gave him the following history of her case, drawn up by her physician at New Orleans.

"The first circumstances which had any connection with the singular affection of this young lady, were, a complaint of constant head-ache, attended with a disposition to vomit without nausea occurring first, during convales-

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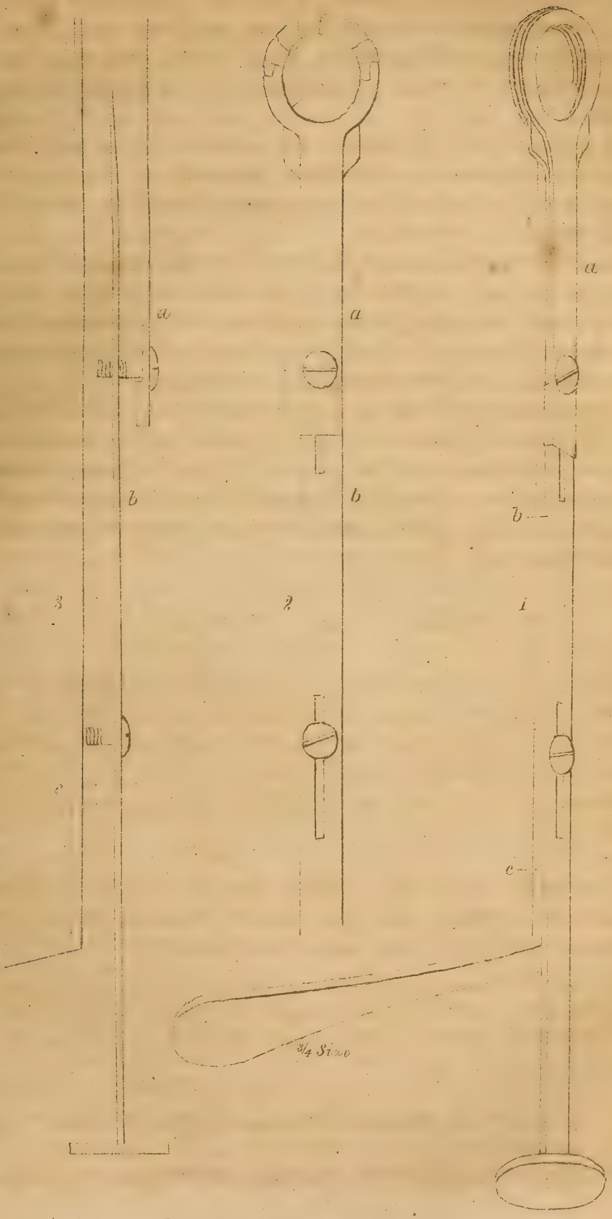
* See Treatise on the Diseases of Females, Chap. "On Hydatids of the Uterus," by the author.

† See his interesting case in the preceding number of this Journal, p. 240

Plate 3 vol. 1



Drawn on Stone & Pr. by J. Drayton

cence from an attack of remitting fever, in the middle of May, 1826. The latter symptom soon became the most prominent, and increased to a constant effort to retch, in which nothing was thrown up from the stomach, and which was not relieved by free vomiting. At this time no complaint of pain was made any where but in the head.

"Considering the gastric irritation as sympathetic of an incipient cephalic affection, leeches were applied to the temples and behind the ears, and some doses of active cathartic medicines given. No advantage was derived. The retchings became nearly constant, and from a noisy effort to vomit, it gradually changed to a convulsive cough, altogether involuntary and uncontrollable, and conveying an impression as if something obstructed and irritated the organs of respiration. This is, as nearly as it can be described, the character of the cough ever since.

"The first paroxysm increased in violence for a number of days, and until the 8th of September, when, about mid-day, after vomiting, (which was at this time not unusual with her,) in which she threw off a quantity of white tough mucus, she fell into a state of extreme prostration. The cough ceased and she appeared to be dying. From this she slowly revived through the evening, and on the next day there was a degree of reaction amounting to fever, which gradually subsided and left her quite well.

"The mucous expectoration, likewise, though at the time regarded with some interest, has, in the latter attacks, been produced occasionally in vomiting, but never followed by the same alleviation. On the recovery from the first attack, she remained well for two weeks, when she was again seized with the same spasmodic cough, attended with pain in the breast, but not preceded as before with any irritation of the stomach. This, after continually increasing in violence for about eight days, again left her in nearly the same manner it had done in the first instance. After an interval of three weeks, she had another attack of the same duration, and of extreme severity. Since this there has been two more, but at longer intervals, and not altogether of the same severity.

"The dates of the different paroxysms are the early part of September—of October—of November—of January—and of May. During the long interval between January and May, a slight cough of the same peculiar character has seized her every morning on awaking, after which she remains entirely exempt for the remaining twenty-four hours. At first it lasted for a few seconds only, but its duration gradually increased to thirty or forty minutes. Since the last violent attack it has been reduced to only a few moments continuance."

After many remedies had been used in the above case, without affording any permanent benefit, the patient was sent to Philadelphia, and Dr. Physick consulted. The circumstances appeared to him to point out an elongation of the uvula as the cause of the disease. On examining the throat, he found such an elongation actually existed. This was explained to the patient and to her friends, and the excision of a part of the uvula was performed, immediately after which all the symptoms ceased entirely, and have not since returned in the slightest degree.

In the operation of cutting off the uvula, Dr. Physick has, until very lately, used scissors; but being unable to complete the operation by one application of that instrument, several have been necessary to effect the division of the part. To obviate this difficulty, he determined to try the old instrument, as modified and represented by Benjamin Bell, in his System of Surgery. He found, however, that although he could divide with that instrument, the greater part of the uvula, a portion of the membrane that covers the back part of it, was not always divided, making the use of scissors necessary to cut it through. To remedy this inconvenience, he caused an instrument to be made as represented in the annexed figure, having two plates instead of one, between which the knife was passed, but still the same difficulty was experienced in cutting through the membrane on its posterior part. He then thought of wrapping a strip of waxed linen over the semi-circumference of the opening, to support the membrane until it should be divided by the knife. Thus constructed, the instrument answered his purpose completely, and cut through the whole substance of the part in an instant. Dr. Physick has since used an instrument of similar construction for the removal of scirrhous tonsils. He finds it easy to cut off the whole, or any portion that may be necessary, of the enlarged tonsil in this manner. The operation can be finished in a moment of time. The pain is very little, and the hæmorrhage so moderate that it has not required any attention in four cases in which the doctor has lately performed it.

The instrument is so accurately represented in the annexed plate, that a very brief description of it is all that can be required. Three views are given; 1st, a perspective; 2d, a front; 3d, a side view, the parts separated to show them more distinctly. The whole instrument is made of steel, and consists of two plates, *a*, and *c*, between which is the cutting-blade *b*. The upper plate, *a*, is short, and is fastened to the lower, *c*, by a screw, which passes through a groove in the blade *b*. The lower plate *c*, is longer than the upper, and is bent at one end so as to form a handle. Between these two plates is the blade *b*, one termination of which is somewhat lance-shaped and sharp, the other has a button on it, upon which the thumb is pressed, when it is wished to push forward the blade. The blade is made to move steadily by the screw, which connects together the upper and lower plate, and also by a second screw which passes through a groove in the blade and fastens in the lower plate.

In figure 2, the strip of waxed linen is represented wound round the semi-circumference of the opening.

The size of the perforated end of the two plates, and of course that of the knife must be larger in the instrument for extirpation of the tonsils, than in that for truncation of the uvula.

The instrument employed by Dr. Physick, was made by Mr. Henry Shively, No. 75, Chesnut street.

ART. III. *Observations on some points of Pathology.* By WILLIAM E. HORNER, M. D. Adjunct Professor of Anatomy in the University of Pennsylvania.

A FINE injecting matter may be pushed into any vessels into which red particles of blood can naturally penetrate. I have repeatedly filled the whole venous system from the arterial, so as to display all the fine venous meshes under the skin, and to infiltrate the body completely. Judging from these experiments, I am disposed to think that some of the phenomena of inflammation arise mechanically, and that the substance effused from vessels is in a measure according to the mass and momentum of blood flowing through them. Thus when irritation determines an increased afflux of blood to a part, if the calibres of vessels are not large enough to permit it to pass freely from the arteries into the veins, serous infiltration first of all occurs: if the afflux be augmented, then coagulating lymph, the particles of which are larger, is effused; and if there be a further augmentation of afflux, the red particles of blood are then effused through the lateral porosities of the vessels. The corresponding phenomena in fine injections, are, first the water, then the size, and lastly the colouring matter, from its particles being the coarsest of the mixture.

Though many dropsical effusions may be traced to irritation, yet I am disposed to think that some very great errors have been incorporated with their pathology, from the desire to adapt all the phenomena to one standard, to wit, inflammation. This at least I know, that in fine injections of whole adult dropsical subjects, no resistance scarcely is offered by the blood-vessels, and that the injected fluid escapes from them by their lateral parietes or porosities, as fast as it can be thrown in; manifesting thereby evidently a great laxity in their texture. This escape is generally in the order in which we see dropsies to occur, first in the ankles and feet, then up the lower extremities to the trunk; in the hands and wrist, and then up the pectoral extremities to the thorax.

The purpura urticans which occurs in the skin in dropsy, seems to be an extravasation of blood arising from the same passive or loose texture of the blood-vessels. I have repeatedly seen the same sort of ecchymosis in the muscles of dropsical subjects, and in the interstices between them.

Pathologists have said much on the distinction between venous and arterial capillary hæmorrhage; I doubt very much the practicability of making out either case very clearly and distinctly from the other, yet they have rather unsoundly drawn the inference, that spontaneous bleeding from the venous system is passive, while that from the arteries is active. Judging from mechanical arrangement, I am inclined to think that all hæmorrhage not arising from violence or mechanical injury comes from the arteries; inasmuch as microscopical observation teaches us that the blood in getting into the extreme arteries is there confined to the smallest sanguiferous channels, and it is of course there that rupture is most likely to occur, for so soon as the blood reaches the veins the channels are larger, more dilatable, and therefore, less liable to be broken. Genuine venous hæmorrhage, is probably most frequently the result of obstruction to a large venous trunk, either by pressure on it, or by something similar; thus we see in women during pregnancy bloody spots of ecchymosis on the legs from ruptured veins; and in persons with varicose ulcers, frequent bleeding from the latter, when the erect position puts too great a column of blood upon them.

Red blood is excreted from the pleura in its severe inflammations, and judging from what I have observed, the order of the effusion is first serum, then coagulating lymph, and then red particles of blood, all of which may, as in inflammation of other textures be indicative of the gradual dilatation of the blood-vessels. The most remarkable instance of this successive secretion, excretion, or effusion, whatever it may be called, that I have met with, occurred the last winter in our dissecting rooms; in this case the marks of inflammation were all recent, and had supervened upon a tuberculous phthisis of both lungs. When inflammation occurs in the pulmonary tissue itself, it is always marked by an accumulation of red blood in their structure, giving them a red purple colour, (Bichat, Anat. Gen. Vol. 2d. p. 62.) by their increased weight, diminished elasticity, and by their being much more watery than usual, probably from the serum being separated from the red blood after death. There is also a considerable quantity of frothy mucus in the bronchia. This state of the lung is most frequently attended with a recent effusion of coagulating lymph on the pleura, and by a bloody serum in the thorax. It is, however, to be observed, that bloody serum being found in the cavity of the pleura is not an absolute proof of its being secreted or discharged in that state, because if the examination be much postponed after death, the serum effused may be tinged by the lung soaking in it.

It is owing to the blood-vessels of the lungs being so superficial, that as in the intestines, their inflammations pass off either by an increase of their natural secretion of mucus, or by the effusion of serum and of blood. LAENNEC has said, (vol. i. p. 116,) that a collection of pus in the pulmonary tissue in consequence of inflammation, is one of the rarest of cases, at least it is one hundred times more rare than a vomica from tuberculous matter, and a thousand times more so than empyema. In all the dissections of lungs that I have made, I have met with it but once, and that lately, (June 29th, 1827,) at the Alms-house, in which case the surrounding part of the lung was gangrenous.

ART. IV. *Clinical Reports of Cases treated in the Infirmary of the Alms-House of the City and County of Philadelphia.* By SAMUEL JACKSON, M. D. one of the attending physicians.

IN the preceding number of this Journal, a continuation of clinical reports of cases occurring in the Alms-House Infirmary was promised. Those now reported are some of the most interesting that came under my notice, during the term of my duty in August, September, and October last. The history of the diseases, is chiefly taken from the case-book, in which the student of the ward, copies from his note and prescription book, the daily observations on each case and the treatment directed. The autopsical histories are principally from my own notes, and in some instances, I have supplied from the same source omissions in the history of the cases as kept by the students; and have corrected some few inaccuracies, none of them, however, are of material importance. I have to regret that several of the cases of highest interest, in consequence of the severe and protracted illness of Messrs. ASHMEAD, BETTNER, and HORNER, who were successively taken down with fever, contracted through fatigue, and probably from exposure to putrid miasm in repeated dissections, and the foul air of some of the wards that were over-crowded with patients, were kept in too imperfect a manner to be recorded.

An unusual number of fever patients entered the infirmary during my period of attendance. In August and September, most of the cases occurred in newly-arrived Irish emigrants. They were generally persons of temperate habits, and good constitutions. This fever was a gastro-enteritis, with meningeal or other complications. Its occurrence in this class of people, I attribute to the sudden alteration in their diet, and change of climate. On inquiry, I uniformly received the information, that in Ireland, their diet had consisted of potatoes, oat meal, or buttermilk. Several had seldom tasted meat, and none oftener than three or four times in a year. From this temperate and moderate diet they were transferred at once, on ship-board, to animal food of the most stimulant character—salted meat. After arriving in the United States, they fell into our habit of eating meat daily, and sometimes two and three times a day.

The period at which they arrived, was also propitious to the production of this form of disease. July and August are the months of greatest heat, which never fails to awaken the gastric sensibility. Between the skin and stomach the sympathy is direct, and when the first has its irritations or actions excited, those of the last are increased at the same time. From this cause, those who pass from a temperate to a warm climate are subject to attacks of gastric and intestinal diseases. The sympathy between the skin and pulmonary system is precisely the reverse.

To the combined effect of the two causes that have been mentioned, I am disposed to impute the prevalence of fever amongst the newly-arrived Irish.

By the daily papers, it appeared, that the Irish who arrived in Nova Scotia were attacked, also, with fever. It was represented as of a most fatal character; carrying off nearly all who were its subjects. It was named malignant typhus. A considerable portion of our patients, were amongst those who arrived at St. Johns, but who immediately proceeded to Philadelphia. The mortality of the disease was but slight with us, and its character generally not intractable. To what is the difference to be attributed? The plan of treatment pursued with those under our charge, was strictly antiphlogistic, and those whom we lost perished chiefly in the chronic form of disease from disorganizations, induced frequently before the patients came under treatment.

The febrile cases of the last of September and the month of October were principally amongst the blacks, and in this class were often very unmanageable. In the majority of the cases of those months, both in blacks and whites, bilious symptoms—the irritations of the hepatic organs—were unusually predominent. Few cases occurred that were not attended with a jaundiced state of the skin and eye, and on examination all the white tissues were found of a yellow tinge.

Case I. *Remittent Fever—Gastro-Enteritis.*—Rebecca Stewart, aged twenty, was admitted July 30, 1827, into the Women's Clinical Medical Ward. She had arrived three weeks before from Ireland—was a month on the voyage—healthy aboard—has lived near the wharf—not exposed to the sun—been sick a week: attacked with pain in the head, debility, dryness of mouth, great thirst, and vomiting. No relief followed the vomiting. Took some medicine which vomited and purged her, and she felt better. At present she has no tenderness of epigastrium; skin very hot, face flushed and turgid, eyes full and injected, pulse full and frequent, muscular debility, nausea, deafness. ℞. Sp. mindereri, ℥viij.—sulph. magnes. ℥iss.—antim. tart. gr. iij. M. S. ℥ss. q. b. h.—Ordered cold to head and arms; barley water to drink.

July 31*st.* Seems better—pulse nearly natural—skin less hot—tongue red on the edges—its centre furred, but moist—a sensation of heaviness in the head—does not see or hear well—a little soreness at epigastrium—bowels freely opened—stools watery—all medicine forbid by Dr. Jackson. Ordered pearl barley water for drink, and cold to surface continued.

August 1*st.* Improving. Still complains of heaviness in the head, and noise in her ears, like the roaring of the sea—bowels open—no pain at epigastrium. Treatment continued as before.

4 P. M. An exacerbation of fever, probably owing to the excessive heat of the weather, declined towards night. The acidulated and iced water were relished and freely taken; also the cold ablutions, which gave much relief.

2*d and* 3*d.* All the symptoms abating—the face becoming pale—skin moist—tongue losing its redness—sight and hearing improved.

4*th.* Some little fever—bowels costive. ℞. Ol. Ricini, ʒii.

5*th.* Is sitting up this morning.

10*th.* Convalescence uninterrupted. Allowed chicken soup; then milk, bread, roasted potatoes, &c. for diet.

Discharged well.

Case II. *Remittent Fever—Gastro-Enteritis.*—Mary Stewart, aged eighteen, admitted July 30, 1827, into the Women's Clinical Medical Ward. She is a sister of the subject of the foregoing case—had entered into service, and was employed in washing—attacked with the ordinary symptoms of fever, but the pain in the head unusually acute. Took an emetic and several doses of salts, which made her worse. She had no thirst previous to taking the emetic. At present her face is very much flushed—eyes injected—head painful—pulse quick, but not full—tongue furred and little dry—red on the edges

—thirst urgent—bowels open—her skin is hotter, and her aspect altogether less favourable than that of her sister. Ordered the following:—℞. Sp. mindereri, ℥viij.—sulph. magnes. ℥iss.—antim. tart. grs. iij. M. S. ℥ss. q. b. h.

July 31*st.* Thinks that she feels a little better—pulse still quick and frequent—head heavy—seeing and hearing both impaired—bowels open—tenderness at epigastrium. Prescription of yesterday forbid by Dr. Jackson; ordered iced acidulated drinks; cold ablution; fifty leeches to epigastric region; the extremities to be enveloped in warm fomentations.

August 1*st.* No better—skin hot and dry—tongue red but moist—complains of pain and ringing in her head—pain at epigastrium—is weak—thirst intense. Ordered ablutions to be continued, and injections of cold mucilage to be repeated.

4 P. M. An exacerbation of fever—head much affected—eyes dull and heavy. Ordered fifty leeches to back of head and along the jugulars.

10 P. M. Violence of symptoms abated. She found much relief from the leeching and cold applied to arms, face, and head.

2*d.* Is better this morning. Her skin cooler—face less flushed. Treatment continued—℞. Magnes. ust. ʒii.

3*d.* Fever abated in violence.

4*th.* Not so well this morning. Fever increased about the middle of the night—mind quite flighty—skin hot, particularly about the head—tongue clean but moist—much thirst—pulse quick, feeble, but frequent—breathing hurried and laborious—pain at epigastrium—bowels open yesterday. Ordered cold applications to head and epigastric region, and injection of salts.

Night.—The cold has been continually applied, and she seems much relieved—skin far less hot—the eye less dull and watery.

5*th.* Exacerbation about the middle of the night—the mind wandering. She feels better this morning—less heat and flushing—breathing more natural—eye still dull and injected—pulse a little frequent—she sleeps a great deal—stools natural. Treatment continued as before.

Night.—Fever abated very much.

6*th.* Escaped the delirium and exacerbation last night—little fever this morning—face less flushed—skin softening. Treatment continued.

7*th.* Complete remission this morning. Ordered oat meal gruel.

8*th.* No fever—head still heavy—tongue less red.

9*th.* Improving—centre of tongue remains brown.

15*th.* Fever gradually declined. Its absolute solution marked by no crisis. Her bowels, when necessary, were simply moved by small doses of magnesia or oil; the discharges natural. She had chicken-water, sago, &c. allowed for diet, and she has totally recovered without a relapse or sequelæ of the disease.

Observations.—The preceding cases recorded by R. L. Fearn, student, are examples of common remittent fever or gastro-enteritis, so common in the commencement of warm weather. They manifested cerebral symptoms, the invariable concomitants of acute gastric inflammation. The cerebral sympathetic irritation did not acquire an intensity sufficient to become independent of the gastric inflammation in either case. In Mary, on the first of August, the cerebral symptoms rapidly increased, and the irritation of the arachnoid and pia mater threatened to take the lead in the train of morbid phenomena. The application of leeches along the jugulars, and around the base of the head gave an immediate check to this complication.

The prescription directed in both cases previous to my visit to the patients, though a common formula in fevers was discontinued, that the existing inflammation of the mucous tissue of the stomach and intestines might be attacked by the most direct and appropriate means. That formula is certainly far preferable to the active and drastic cathartics frequently resorted to, and the employment of which has been so much misapplied and abused since the publication of Hamilton's work on purgatives. Still its immediate direct mode of operation is that of an irritant to the surface to which it is applied. This irritation it is true, under common circumstances generally produces secretion from the exhalent vessels and mucous follicles of the mucous tissue of the intestines, and a purgative operation is the consequence. This irritation and secretion are the essential element in the action of a purgative. But it is a well demonstated fact, that an irritant applied to an irritated surface, will as frequently dry up and prevent secretion as excite it.

Purgatives in the acute stage of fevers attended with inflammation of the gastro-intestinal mucous tissue, when they do excite copious secretions, counteract their own injurious tendency, and often arrest or diminish the inflammation of this membrane, when it is not deeply radicated or extensively diffused. It is, however, in the experience of every practitioner, that active purgatives in fevers frequently fail to produce evacuations: they cannot bring forth secretions from a highly inflamed surface, whose actions transcend the point at which secretion can take place. The irritation of the purgative, under such circumstances, is added to that already existing, and all the symptoms are aggravated.

The excitement of secretions and evacuations by purgatives in fevers very frequently, instead of alleviating the condition of the patient, renders it much worse. It is not uncommon that an apparent amendment will ensue from very free, copious, intestinal secretions procured by purgatives, for twenty or more hours, to which succeeds an aggravation of the precursory symptoms. The depletion operated in this manner on the general circulation, serves temporarily to tranquilize the sympathetic irritation of the central organ of the circulation; and, in consequence, the febrile symptoms—frequence and force of pulse, heat of skin, &c. depending on that condition of the heart, are for a short period abated. The symptoms of the local irritation may for a time be smothered from the extent of the evacuations, but they break forth with increased violence.

The administration of active purgatives in fevers, often proves injurious, by rendering extensive a morbid irritation which may be very limited. The purgative, irritating zone after zone of the mucous coat of the alimentary canal, as it passes along, becomes a conductor of the inflammation, restricted primarily to a small portion of this structure, and spreads it over nearly its whole surface. In the tegumentary tissue of which the digestive mucous membrane is a part, erythemoid inflammation, as it is called, has a strong disposition to propagate itself, even without a provocative. From this cause, those labouring under fevers, who are treated by drastic cathartics or other irritants, have the abdomen to become tumid, hard, painful to pressure, tympanitic—to be meteorized as these collective symptoms were formerly designated; the bowels are costive, and very little flatus is discharged. Here the inflammation has not passed beyond the ileo-cœcal valve and penetrated into the large intestines. This does occur, however, sometimes, and then is added to the foregoing symptoms, a diarrhœa with varied discharges of different hues and appearances; brown, white, black, and bloody, and involuntary stools, according to the intensity of the inflammatory action. When purgatives and other irritants of the gastro-intestinal mucous membrane are abstained from, or but sparingly employed, these symptoms are of very rare occurrence, in fevers even of a high grade of action, and which may prove fatal by the disorganization of the mucous membrane of the stomach, effusion on the brain, &c.

From these principles I have adopted the practice, the oldest in medicine, and if authority be entitled to consideration, sustained by the weightiest in our profession, of abstaining generally from purgatives in the commencement of acute fevers, and of combating, by directly debilitating remedies, the excessive actions in the tissues in which they are located. From a comparative experience of several years practice on both systems, I am daily more convinced of the superiority of that I now pursue. Those cases of fever, in which the capillary irritation is of a light grade, or a limited extent, and in which purgatives prove successful remedies, the unmixed, positive antiphlogistic treatment, established on anatomical and physiological principles, will be found in the great majority to be more speedily cured, without the slightest risk being incurred of converting them into more formidable affections.

In the report of the case of Mary Stewart, it is remarked, that the fever gradually declined without any marked crisis. This circumstance is commonly observed in the diseases treated on the physiological plan. The morbid irritation being attacked in a direct manner, gradually yields, and with its diminution the sympathetic disturbances to which it gives rise, subside, and the organs resume their natural functions.

CASE III. *Remittent Fever—Gastro-Enteritis.*—John Stewart was admitted July 30th, 1827, into the Men's Clinical Medical Ward. Face flushed—eyes injected and watery—skin very hot—pain in the temples occasionally darting and severe. Breathing deep and sighing—cough—tongue dry, pointed, very red, edges dry, surface of tongue a brownish fur—bowels moved, and were freely moved on the 29th by a purge—lips dry—some sordes on teeth—pulse 120, frequent, compressible. He had lately arrived from Ireland, after being six weeks at sea—was of temperate habits—was attacked July 22. Ordered neutral mixture, ℥ss. q. b. h; barley water and tamarinds; cold cloths to head, and to sponge arms with ice water; pediluvium pro re nata; cups to epigastrium; calomel and ipecac. in small repeated doses.

P. M. 4½. Fever abated—pulse rather slower and fuller—tongue the same—slight wandering of mind.

31*st.* Slept some—bowels not open—quite stupid in the night—eye watery and injected—skin hot and dry—pulse 128; moderate strength—tongue dry on surface and disposed to brown fur—teeth fuliginous—no pain—tenderness under left ribs. Ordered castor oil, ℥ss; cups to head; cold applications to abdomen; injections; thirty leeches to epigastrium; omit cal. and ipecac. and neutral mixture. Thin oat meal gruel and ice added to drink. If stupor continues after leeching, hot fomentations to legs.

Evening.—Tongue dry and skin rather hot.

August 1*st.* 4 P. M. Has been quite flighty—face is flushed—skin dry and hot—tongue dry and some fur, in the morning it was dark—bowels open—tremor of hand—pulse 130, pretty full, active, and of moderate strength. Ordered cups to head; cold injections; cold to abdomen; warmth to extremities; sago water.

9 o'clock. Arms cool—face flushed—tongue covered with thick mucous fur, and inclined to moisture—less flighty—breathing rather laborious—pulse 120, soft, but some tension.

2d. Tongue dark, crusted and cracked, edges moist—fever high during the night—flighty—discharges thin and yellow—face cool—hands dry and warm—tongue disposed to dryness.

12 o'clock. Fever abated—more moisture of tongue.

6 P. M. Fever higher—rather stupid—pulse frequent, but pretty good—tongue same. Ordered cups to back of neck.

10 o'clock. Flighty—less stupid and more talkative—fever abated—skin moist—tongue same.

3d. Pulse reduced—fever less—tongue moistening and is better—slight wandering of mind—skin natural. Cold to head and abdomen continued.

5 P. M. Very little fever—tongue thick and moist in the centre—skin nearly natural—bowels open—slight tremor of hand.

4th. No fever all night, and slept—bowels open—stools consistent and yellow—tongue cleaning at the sides, centre incrusted and moist.

2 P. M. Complete remission and moisture of skin.

5th. No fever—tongue moist and cleaning—edges clean.

7th. Convalescent.

Observations.—This case, recorded by Mr. Ashmead, senior student, was precisely similar to the preceding. Stewart is father to the two girls, the subjects of the foregoing cases, and his disease was of the same character. It yielded very speedily to the same plan of treatment. All the members of this family, though residing in different parts of the city, were attacked at nearly the same time, with the same form of disease, inflammation of stomach and small intestines. This circumstance is a corroboration of the views presented of the exciting causes of remittent fever, amongst the newly-arrived Irish in the summer season. The bowels, it is to be observed, were regularly opened without the use of purgatives.

Case IV. *Remittent Fever—Gastro-Enteritis.*—F. Martin was admitted, July 26th, into the Men's Clinical Medical Ward. His tongue was brown and dry in the centre, edges white and moist—pulse soft, pretty natural, frequent—lips dry and scaly—bowels regular. He had lately arrived from Ireland, was eight weeks at sea, well on the passage, and when arrived worked one week in an ice-house, and sometimes in the day exposed to a hot sun—has been sick one week—was taken with pains in the arms, and unable to move them—chilliness and sick stomach. Next day took a purge and continued his employment, but the day following omitted work and drank hot teas to produce perspiration, which relieved pains in shoulder. On 25th had head-ache and took a purge, and was admitted on 26th with his father, mother, and sister, all having fever. Ordered barley water and lemonade; cold applications, and neutral mixture.

2 P. M. High fever—head-ache—eyes reddish—face rather flushed—tongue red at tip, edges white and furred, with the impression of the teeth, centre brown and dry—lips and teeth dry—breathing hurried—skin hot and dry—carotids distinctly seen pulsating—sickness of stomach—pulse frequent, full, and strong—no tenderness of epigastrium.

8 P. M. Skin same—some moisture of palms—soreness of flesh—soreness of epigastrium—pulse frequent—sordes collecting on teeth—tongue same, but moist.

27th. Rested badly—short cough—fever abated about twelve at night—cannot stir his legs, and very sore—pulse frequent and pretty good—blowing respiration—tongue dry, tip red and dry. Prescribed fomentations to lower extremities; cups to abdomen, and treatment continued.

6 P. M. Bowels open—tongue brown in centre—pulse the same. 9. Skin hot—tongue moist.

28th. 8 o'clock. Rested badly last night—remission—pulse 100—tongue dry and dark in centre, edges moist and light, tip dry—sordes on teeth and lips—short dry cough, causing pain in breast—soreness of abdomen—soreness of extremities gone—bowels open—not very thirsty. ℞. Calomel and ipecac. M. ft. pil.; treatment continued.

5 P. M. Tongue same but moist edges—skin hot and dry—no pain of epigastrium or soreness of legs—pulse 100, less excited.

29th. Some remission—heat rather above natural—lips and teeth dry—cough—breathing hurried—bowels open—considerable fever all night.

6 P. M. Skin rather hot—teeth fuliginous—feels weak—tongue brown, dry, and cracked in centre—pulse pretty good.

30th. 6 A. M. Fever much abated—slept well. 9 o'clock.—Tongue same—skin hot—bowels moved—eyes little injected—thirsty—tremor of hands and legs—knit eyebrows—pulse 120 and rapid.

12½ P. M. Less hot, heat 102. Prescribed cold flaxseed mucilage to abdomen; cold to head; continue pills and neutral mixture. 3½ P. M. Skin hot and dry—tongue moist. Ordered leeches to epigastrium. 10 o'clock.—Tongue more moist—fever less.

31st. Tongue disposed to clean from edges, and moist—heat less—slept well—bowels open. Prescribed barley and tamarind water; cold to head, arms, and abdomen to be continued; cold injections; thin gruel.

P. M. Tongue cleaning—edges moist and red—skin hot and dry—in evening, fever abated. Prescribed cold to head, arms, and abdomen; cool mucilaginous injections; barley water acidulated.

August 1st. Fever returning—tongue dry and deep brown in centre—edges moist and tumid—skin dry and hot—eyes injected, and teeth fuliginous—small abscesses on legs—bowels open—mouth bitter. Ordered thin sago water acidulated; leeches to epigastrium and anus, and cold applications.

3½ P. M. Fever abated—skin moist—eyes not injected—no pain—teeth and lips dry—edges of tongue white and moist, centre dry and brown—pulse 100, some tension. 6 o'clock. Tongue moist, and fever abating—skin disposed to moisture—lower extremities dry.

2d. Skin cool—tongue on one edge moist, the other dry, centre dark and incrusted—pulse pretty good, full and soft. Treatment continued, and if fever continues, leeches to anus.

1 P. M. Considerable apyrexia—skin moist and natural—tongue moist and cleaning—pulse 80 and good. 7 P. M. Tongue dark in centre and incrusted, edges moist, some redness, and difficulty of protruding tongue far—pulse frequent and soft.

3d. No fever—edges of tongue moist—centre more moist and disposed to clean—pulse same—rested well.

3½ P. M. Tongue rather moist—no fever—skin natural—bowels open—not thirsty.

4th. Skin natural—tongue cleaning, moist and nearly natural colour—unable to stand—pulse 80—phlegmons on legs. Omit cold applications; ordered soup.

5th. Tongue tumid, with slight white fur—rather fullness of abdomen—skin moist and natural—no appetite—sleeps pretty well—pulse 72.

7th. Convalescent—tongue white and moist—pulse 60 in a minute. Discharged well.

Case V. *Remittent Fever—Gastro-Enteritis, ending in Chronic Colitis.*—L. Maran was admitted July 26th, into the Men's Clinical Medical Ward. Habits intemperate—frame robust. He was attacked on the 25th—had been complaining fifteen days. Had shortness of breath—no pain, but felt very ill—feeble—giddiness of head—bowels open—good appetite—rested bad—very thirsty last night. Ordered Castor oil, ℥ss.; neutral mixture, ℥ss. q h.; fomentations to legs.

3 P. M. Great tenderness of epigastrium—skin hot and burn-

ing—sometimes he feels cold and chilly—pulse frequent, moderate volume, pretty good—tongue red at tip and pretty clean, but slight white fur towards the base—bowels open freely. Ordered cold to head, and cold sponging. 8 o'clock. Fever abated—breathing more easy—skin moist and warm.

27th. Tongue moist—pulse good—cough gives pain in head—soreness of breast abated—tongue very red, moist, and rather cleaning—skin rather hot—bowels open—no head-ache. ℞. Calomel gr. vj. and oil ℥ss. three hours after; cold continued.

3 P. M. Skin hot—pulse pretty good. 6 o'clock. Fever abating—tongue moist—skin rather hot.

28th. Soreness of legs—skin comfortable—bowels very open—tongue furred—pulse 100.

5 P. M. Pulse 120—no tension.

29th. Better—tongue moist, clean, and very red—bowels very open—skin rather hot—pulse small, frequent, tense. Ordered calomel, opii, ipecac. in small quantities frequently; soda powders; cold continued; omit neutral mixture.

6 P. M. Tongue cleaning—fever abated—pulse excited.

30th. No fever—skin natural—tongue clean, red, and dry in centre, edges moist—thirsty—rather dull—bowels better—pains in knees better—slept well. Treatment continued.

12 o'clock. Tongue very red—its circulation very rapid, more moist, centre dry—skin hot—breathing natural—pulse small, frequent, little tense—skin 102°—eyes injected—pulse 120, dullness.

3½ o'clock. Skin hot—tongue more dry—pulse excited. 10 o'clock. Fever abated—tongue disposed to dryness in centre, edges white.

31st. Skin dry and hot—pulse small and frequent—tongue moist, red, some fur—eyes injected, some tremor. Treatment to be continued; cold to abdomen; pills to be omitted.

Evening—considerable fever.

August 1st. Skin pretty natural—pulse 90—tongue clean, red, at tip scarlet—complains of great debility. ℞. Weak solut. sulph. quinine; omit cold applications; ordered sago for diet.

2d. Skin cool—tongue moist and cleaning—slight fresh fur—pulse regular, soft.

1½ P. M. Skin moist and natural—tongue rather dry in centre, clean at tip—pulse 85—at 7 o'clock tongue dryish.

3d. Dewy perspiration on forehead—skin moist and rather cool—tongue moist at edges, dryish in centre—bowels frequently open—stools watery. Ordered absolute diet, and to omit the mixture of sulphate of quinine.

From this period the febrile symptoms disappeared, and were replaced by a diarrhœa, the effects of chronic colitis or inflammation of the colon. It was treated for a week by Dover's powder, warm bath, and infusion of eupatorium. Profuse perspiration was induced. The diarrhœa was checked, but as soon as the sweating was discontinued, again returned. It was then determined to attack the inflammation by the direct antiphlogistic treatment. Cups were frequently applied to the abdomen, along the course of the colon; demulcent and opiate injections were employed daily, with occasional injections of solution of acetas plumbi. gr. i. to the ounce of water, together with a very restricted diet. It consisted of two soft boiled eggs and four crackers with barley water per diem, occasionally absolute diet, or barley water alone. This method soon controlled the disease; the stools became consistent and reduced to three, to two, and finally to one, in the course of the day. It was not without difficulty the diet was enlarged, each time that a little meat was allowed a relapse ensued. Ultimately on the 22d of September he was discharged well. The bowels had become quite regular, the stools natural, and he was regaining flesh. Crackers, boiled rice, with soup and boiled mutton, had been allowed him in small quantities previous to his discharge.

CASE VI. *Gastro-Enteritis.*—Ann Maran, wife of L. Maran, aged forty-two, was admitted, July 26th, 1827, into the Women's Clinical Medical Ward. She had lately arrived from Ireland, by the way of St. Johns. Her fever is in its incipient stage. Skin hot and dry—pulse quick and weak—tongue moist—bowels regular—head but little affected. She took yesterday, dose of oil, and feels better from its operation. Ordered surface sponged with cold water.

28*th.* Disease more fully developed—skin very hot—pulse stronger—tongue still moist—bowels regular. ℞. Suc. Limon. ℥iss. Sub. carb. potas. q. s. ad saturand. Sac. alb. ℥ss. Aquæ pur. ℥iij. m. s. ℥ss. q. b. h. Cold ablutions to be continued.

29*th.* Bowels opened by neutral mixture—better in every respect—her thirst is still urgent. She takes acidulated barley water.

30*th.* Better—skin still a little dry—tongue clammy—pulse quickened—bowels open—fever still high, but decreasing.

31*st.* Is no better to-day—tongue moist, but red—thirst great—skin hot—hearing impaired—no pain in head—a slight pain at epigastrium. No change in the treatment.

August 1*st.* Skin and pulse natural—tongue moist—low diet continued.

2*d.* She still complains of thirst, but her other symptoms are subsiding. A pimply eruption begins to show itself upon her body.

5th. She has continued to improve gradually—costiveness obviated by ʒij. doses of magnesia, or by oil.

8th. Is completely well, but complains much of weakness. Her chicken-water was exchanged for soup. A few roasted potatoes also allowed.

Case VII. *Gastro-Enteritis*—Mary Maran, daughter of Ann Maran, aged six years, was admitted, July 26th, 1827, into the Women's Clinical Medical Ward. She presents the same symptoms as those of her mother, detailed in the foregoing case, but there is greater heat of surface and her abdomen is tumid. Pulse small, quick, and frequent. ℞. Ol. ricini, ʒii.

27th. No change of symptoms—bowels costive. ℞. Sp. Mindereri, ℥iv. Sulph. magnes. ℥ss. m. s. ʒii. q. h.

28th. Medicine purged her. She remains very much the same. Medicine continued.

29th. Fever very high—pain at epigastrium very severe—the breath hot and offensive—teeth and tongue clammy—pulse quick, frequent—is very restless and fretful. Ordered forty leeches to the epigastrium; an injection of cool mucilage; and cold to the surface, particularly to the abdomen and head.

30th. Fever still high—tongue moist—pain in the head last night—bowels open.

31st. Is sleeping—her skin and pulse nearly natural—bowels open once to-day—still complains of pain at belly.

August 1st. Fever but slight—bowels not open since yesterday morning. Ordered a dose of salts.

3d. Her fever completely subsided, but she still complains of pain in the abdomen, which is also much swollen.

6th. Had paroxysm of fever, attributed by Dr. Jackson to too full a diet, which was reduced.

10th. No return of fever—abdomen tense and distended—skin pallid—itching of nostrils. Dr. Jackson ordered the following. ℞. Fol. sennæ, ʒii. Manna opt. ℥i. Sem. chenopod. ʒss. m. Aq. Oj. s. ℥j. pr. re nat.

11th. The medicine purged her actively, was given at distant intervals. There came from her a number of worms of the species trichuris.

15th. Is well.

Case VIII. *Gastro-Enteritis.*—Caroline Maran, aged eighteen, was admitted, July 26th, 1827, into the Women's Clinical Medical Ward. She had landed from Ireland, with her parents and family, whose cases have preceded, three weeks since; was taken sick ten days ago; had lived in the suburbs of the city. She has pain in the head—dull, heavy aspect—hard, dry, cracked tongue—skin husky and hot—pulse weak and quick—breathing impeded—bowels open. She is quite deaf. Ordered eighty leeches to epigastric region; barley water acidulated to drink; warm fomentations to extremities.

27th. Pain of abdomen lessened—no better in other respects. ℞. Sp. mindereri, ℥viij. Sulph. magnes. ℥iss. m. s. ℥ss. q. b. h. Surface to be well sponged with cold water.

28th. Pulse nearly natural—a little excited—skin yet dry, though less so than yesterday—tongue improved, though clammy—bowels opened last night by enema. She seems very dull and inclined to sleep. Treatment continued, but medicine only to be given pro re nata.

29th. Is much better—pulse and skin natural—tongue is quite moist—bowels freely opened—appetite returning.

30th. Improving—allowed gruel.

31st. Convalescent—diet, chicken soup.

August 1*st.* Tongue a little dry—diet decreased.

2d. Free from all fever. Her skin is a little dry.

3d. She was ordered to have the surface sponged with warm water.

5th. A relapse was threatened from some imprudence in diet. A reduction of her diet reinstated her. The deafness has completely subsided. A singular eruption, consisting of red blotches, very harassing from their itching, appeared over the whole of her body. It subsided in a few days without medicine.

September 1*st.* She remains in the ward awaiting the discharge of her father, and her health continues robust.

Observations.—The preceding five cases occurred in the members of one family that had recently arrived via St. Johns, from Ireland. Although living in different places, yet nearly at the same time they were attacked with gastro-enteritic fever, that put on the remittent type. It resembled in its general features the fever by which the Stewarts were affected. This family affords additional evidence that the epidemic gastro-enteritis of the Irish emigrants was the result of change of climate, and a stimulating diet to which they were unaccustomed.

Lawrence Maran, the father, was treated for some days before I saw him, with saline purgatives, and which were not immediately discontinued, as in the foregoing cases. He was also under the use of calomel, ipecac. and opium, until 31st July. Symptoms of debility appearing, with declension of febrile state, solution of sulphas quinine was directed as a tonic. On the 3d of August a diarrhœa commenced, which continued with various intensity until the second week in September. The emaciation became extreme; the pulse was constantly irritable; the skin dry and harsh, except during the period when the sudorific plan of treatment was enforced; and the abdomen retracted and painful on pressure.

The treatment of diarrhœa by sudorifics often proves successful, and was resorted to in L. Maran's case with considerable confidence in its favourable result. These expectations were disappointed, and it was then resolved to trust entirely to a strict regimen, with local depletion and demulcent injections. The functions of the stomach were well performed, and the appetite was good, which occasioned some difficulty in maintaining for so long a period a diet that demanded so much self-denial. The relapses produced by an increase of diet, rendered so obvious the propriety of a severe regimen, it was submited to with cheerfulness, and a complete recovery ensued.

Case IX. *Gastro-Duodenitis.*—Mary Williams, aged forty-five, was admitted into Black Women's Medical Ward, August 17th, 1827. This patient came from a court in the Northern Liberties, whence a few days since three patients had been received into the ward with typhoid fever. They inhabited the same house, which is described as being very filthy, and having a cellar or hole which is very offensive. She was attended by a Dispensary physician, and had taken an emetic which operated very violently. The symptoms on admission are—countenance exhibits a striking expression of indiscribable agony and distress—eyes wild, projecting and rolling rapidly, as if in quest of relief—her mouth open and gasping—tosses her head and hands in every direction—acute pain at epigastric region—tongue dry, cracked, black in the centre—pulse scarcely perceptible—skin cold—she frequently screams aloud—cannot speak—utters inarticulate sounds—has frequent retchings—attempts to bite those around—bites her bed-clothes—had bit the physician who attended her in the arm. Has repeated shudderings, with convulsive movements of the muscles of neck and face; when asked if thirsty nodded assent; when seat of pain and distress was asked her, she pointed to her epigastrium.

Dr. Jackson was present—gave her a few mouthfuls of water, which were immediately rejected, apparently by the action of the stomach alone. Some pieces of ice were put into her mouth, which were crushed and swallowed with voracity. She asks for more by signs, and seems to find relief, chewing them with avidity. Her system appeared too much exhausted to admit of depletion. Ordered iced acidulated gum water, with pounded ice given in spoonfuls every five or ten minutes. Warm fomentations to limbs. Mucilage injections to open bowels; flying sinapisms.

Reaction occurred in about two hours, when twenty-one leeches were applied to epigastrium. Her pulse rose on the depletion, and from the ice drinks. Skin is warm.

August 18*th.* Seems better this morning—slept some during the night—thirst incessant—her pulse a little better—skin again cold—bowels open last night—did not vomit any—tongue less dry and dark—complains of pain in her head—is now capable of articulating some words. Treatment continued, with warm frictions to the skin.

Night. The symptoms aggravated—some difficulty of respiration, with considerable rigidity of the muscles of the neck and arms. The pain extorts the most horrid screams. Ordered cups to the back of the head. She seems to be relieved very much. From some obstructions in rectum, injections cannot be given.

19*th.* Slept well last night—seems better this morning—pulse and skin natural—tongue very dry and dark—pain in the stomach, but not in the head—rigidity of muscles continues.

Night. Is calmly sleeping—no expression of pain—pulse and skin natural—thirst has not been so urgent. She appears in every respect better, and, to the surprise of all who first saw her, there is some promise of recovery; converses with ease, and gave the history of her illness.

20*th.* Decidedly better—pulse and skin natural—tongue more moist and clean—has no pain at the epigastric region—says she is hungry, and begs for food. Treatment continued. 11 A. M. Suddenly became worse—agony returned—pulse much accelerated—pain at epigastrium. These symptoms continue to increase. Ordered fifty leeches to epigastrium, and twenty to back of head.

5 P. M. She seems for a short time relieved.

Night. Very bad, wild, and frantic—tears and bites every thing about her—pulse becoming more quick and thready. She slept none during the night—continuing violent all the night.

21*st.* At day-light this morning seems a little better, but no hopes of recovery are excited—pulse very much irritated. She frequently screams and asks for something to eat. Ordered blister to back of head and neck. Continues to grow worse during the day.

22*d.* To-day she has spit much blood. The attendants think that it comes from the stomach—her mind perfectly irrational—eyes sunk and dull—pulse languishes—she is disposed to be violent, and coercion is necessary to restrain her actions.

23*d*. Continues to sink, and died during the night.

Post mortem examination, six hours after death. Robust form, no emaciation, thick layer of fat beneath the skin. Heart healthy in every respect; firm coagula in ventricles and auricles. Old pleuritic adhesions of left pleura; left lung natural; right cavity presented the pleura and lung perfectly natural. The liver adhered to the diaphragm and duodenum by old adhesions. Stomach, pancreas and duodenum, amalgamated from former disease. The stomach was contracted, and contained a bloody mucus. Its mucous coat intensely inflamed, particularly along the summits of the rugæ; its colour very bright; vessels injected in portions, with masses of blood effused into its substance. Duodenum red pointed injection. Liver natural. The large and small intestines healthy, containing a considerable portion of healthy fæces. The right ovarium converted into a sac, containing about two gills of clear serous fluid. It was adhering to uterus and rectum, and had occasioned the obstacle to the passage of the injections. About the mouth of the uterus, a bloody mucus.

Observations.—This case, recorded by R. L. Fearn, manifested the symptoms of gastritis in the highest degree. I have never witnessed the physical expression of an agony so intense as was displayed by this patient. Her distress was referred to the stomach. Consciousness was unimpaired when admitted, but all her attention was absorbed by the violence of her sufferings. I was on a visit to the house at the time of her admission, late in the afternoon. Notwithstanding the appearance of extreme prostration—the coldness of the skin, the thread-like, scarcely perceptible pulse—the effects of the gastric agony, not of debility—I immediately instituted the debilitating or antiphlogistic treatment. I gave her a few spoonfuls of water, that had been standing in the ward, which was rejected the instant it touched the surface of the stomach. Ice was then ordered and given in small pieces, and gum-water, acidulated slightly with lemon juice, mixed with pounded ice, was given by table-spoonfuls every five minutes. The retching was instantly allayed. I remained to watch its effects, and in an hour's time a considerable change had occurred; the pulse acquired more volume and force, and the extreme agony was somewhat abated. Having thus felt my way, I directed leeches to the epigastrium, with flying sinapisms to the extremities. Before I left the house, about eight in the evening, the action of the skin had been established, its temperature was increased, and the pulse well developed; she was disposed to sleep.

The improvement was so great under the plan of treatment, that for a short time, some expectations of a recovery were excited. The sudden change on the 20th for the worse, I was disposed to attribute to some food having been taken by her. She was very clamorous for something to eat, and the ward was so crowded the nurse could not keep a constant watch over all the patients.

Williams in the commencement of her treatment before she entered the infirmary had an emetic given to her. The violence of the gastric inflammation may fairly be attributed to this cause. The other patients from the same house, had also been treated in a similar manner. They each described its effects as most distressing to them. They manifested also gastric irritation, but which was subdued by a treatment similar to that pursued with Williams.

CASE X. *Chronic Gastritis.*—Dorry Derric, aged thirty-five, admitted into the Women's Clinical Medical Ward, September 11th, 1827. Habits are intemperate; had fever eight or ten days previous to admission; treatment during this time unknown; complains of pain in epigastrium—incessant nausea and frequent vomitings of green matter—pain in the head—skin hot and dry—tongue furred and dry, red around the edges—pulse contracted and wiry—bowels too open. Ordered flaxseed injection with laudanum; hot pediluvium; cold water to stomach and head; barley water for drink.

12*th.* Bowels opened five times last night—continues to vomit a greenish matter. Ordered leeches to epigastrium.

13*th.* The vomiting ceased immediately after the leeching and fever abated—tongue moist and cleaning—skin moist—pulse full, round, and natural—has no fever—great change for the better, bowels opened but once—has slight hiccough.

14*th.* Tongue moist—skin good—complains of pain in the head—soreness at epigastrium—pulse continues good.

15*th.* Has head-ache—bowels not moved yesterday—no fever this morning.

16*th.* Was restless last night—still has head-ache—bowels opened yesterday.

17*th.* Free from fever—skin, tongue, and pulse are good. Allowed thin chicken soup.

18*th.* Great change for the worse—tongue has become dry—pulse irritated—has soreness over the stomach. Chicken soup discontinued; put on low diet. Ordered leeches to epigastrium.

19*th.* Pain relieved by leeches—complains of great weakness—unable to raise herself in bed—tongue dry in middle, moist around the edges—pulse small and slightly irritated—refuses barley water—drink water and milk, equal parts.

20*th.* Very prostrate—tongue somewhat dry in the middle—restless and delirious at night—pulse full and compressible, and slightly irritated—skin moist—on the whole she seems better than yesterday—a slight twitching observable in her arms—bowels opened yesterday. Evening. Has subsultus tendinum. Ordered thirty leeches behind each ear; blister to back of neck; tongue still disposed to become dry—skin dry—takes weak wine and water—Frictions of sp. terebinth. to lower extremities; cold applications to head. Is delirious.

21*st.* Feels better—skin moist—tongue tolerably moist—no delirium, but still has subsultus tendinum—pulse weaker. Treatment continued. Has strangury from the blister—symptoms of subsultus tendinum less—appears improved.

22*d.* Has no fever to-day—tongue somewhat dry—pulse weak and irritated—is very weak. Frictions of sp. tereb. discontinued.

23*d.* Slept tolerably well—tongue red, clean and moist—has no fever—pulse better, less irritated—appetite good.

24*th.* Light diet—rested well—tongue clean and red—bowels opened last night by an injection—pulse fuller, slow and soft—some slight irritation of stomach.

25*th.* Pulse soft, round, and regular—countenance better—appetite good—tongue moist and red—skin dry and harsh. Ordered vol. liniment. to rub abdomen.

25*th.* No great alteration—feet cold. Ordered hot bricks to feet.

26*th.* Tongue clean and clammy—pulse soft and good—sleeps during day, and restless at night—takes chicken soup.

27*th.* Pulse soft and rather frequent—has no fever.

28*th and* 29*th.* Convalescent. ℞. Extr. opii. gr. j.—calomel, gr. ij. M. ft. pil.—take at night.

October 1*st.* No alteration.

2*d.* Great change. It seems by some neglect that the pill ordered for 28th was given by the nurse every day, since it was first prescribed—skin has a pale straw-colour—disposition to sleep—skin cold, moist, and cadaverous—pulse very weak—great rigidity of muscles—refuses chicken soup—bowels opened yesterday—very prostrate—ordered ℞. Carb. ammon. ʒij.—mucilage, ℥ij.—sac. alb. ℥j.—aq. menth. ℥ij.—aq. cinnam. ℥iij. M. ℥ss. q. h. gtt. v. of acet. opii. to each dose; head to be shaved, and mustard plaster applied over it; sinapisms to inside of thighs, afterwards blisters to the thighs and arms; brandy toddy freely. She gradually sank and died in the evening.

Dissection twelve hours after death.—Body emaciated one-half; of light straw-colour—no effusion in cellular tissue.

Head. Arachnoid membrane on cerebral surface opal colour—a slight serous effusion between it and pia mater—ventricles contained ℥ss. serous fluid—brain natural.

Thorax. The viscera of this cavity appeared perfectly natural—the heart contained very little blood, which was thin and watery, without coagula.

Abdomen. Peritoneum healthy, no effusion—liver natural—spleen distended—stomach large, very much relaxed or flaccid, no external marks—mucous membrane, at cardiac extremity of a dirt-brown colour, very thin, no appearance of villi, and nearly diffluent. I have frequently seen the mucus secreted of more tenacity—it yielded to the nail or handle of scalpel with facility—in pyloric extremity it was firmer, but less than half its usual thickness—had red pointed injection—duodenum dirty-ash colour—follicles enlarged—intestines natural.—Case recorded by Mr. Kennedy.

Observations.—Derric, on admission, was suffering under gastric irritation of a high degree, evidenced by the incessant nausea, retching, vomiting, pain of epigastrium, thirst, and fever. These symptoms speedily yielded to the application of leeches to the epigastric region. The irritation had, however, been irradiated on the cerebral membranes; hence the subsultus tendinum.

The absence of all febrile symptoms for several days, led to a belief that a recovery would ensue. It was soon observed, notwithstanding the apparent convalescence, that the food she consumed did not nourish her. Her skin gradually became bombycinous or of a waxy appearance, and husky to the feel. She became listless and indifferent, with light stupor.

The dissection exhibited the partial disorganization or death of the mucous membrane of the stomach, and slight affection of arachnoid membrane. It does not appear to me that her death is to be attributed to this last cause, but rather to the condition of the mucous membrane of the stomach. Healthy, natural digestion could not be performed; assimilation was suspended; the blood, from the absence of fibrin, and impoverishment of its globules, had its stimulant powers impaired, and the actions of the organs in consequence irreparably prostrated.

Acute inflammation supervened most probably to chronic phlogosis of the gastric mucous membrane, which had existed from her intemperate habits. When this event takes place, destruction of the organ in which it occurs very easily is produced. Hence arises the frequency of the disorganizing and fatal effects of inflammation in the intemperate, and the difficulty of treating their acute diseases.

CASE XI. *Intermittent Fever—Intermittent Gastro-Meningitis.*—George Lee, aged seventeen years, was admitted into the Men's Medical Ward, September 6th. One week before was taken with pain in the head and back. Three days after had a severe chill followed by fever, both of which came on regularly every day about 9½ o'clock. Habits temperate.

Symptoms on admission; face flushed—eyes rolling, very red and watery—tongue much furred and dry, fissured transversely—pulse frequent and irritated—skin very hot, and parched—little or no tenderness on pressure at epigastrium—some stupor—ordered cups to back of the neck—cold cloths to the forehead—hot pediluvium, and cold enemata—barley water acidulated, allowed as drink. ℞. Tinct. opii. gtt. xxx. when chill is expected to-morrow.

9th. Paroxysm to-day—fever less intense—bowels well opened—less distress of head—thirst excessive—extremities cold and livid—circulation of skin languid—pulse irritated. Ordered hot blankets to lower extremities; cups to epigastrium, and cold to head.

10th. Paroxysm this morning—skin hot—pulse quick, small, irritated—tongue dry and dark, thickly furred—sordes on teeth—lips dry—eyes less watery and red. Ordered cups to be repeated; cold water to be allowed ad libitum; diet absolute.

11th. Much better—free from fever—skin cool—tongue cleaning on edges—white streak of loose fur on each side—eyes becoming jaundiced—skin yellowish. ℞. Oil to regulate bowels.

13th. Has been improving for several days—had a slight chill to day, which was checked by laudanum—is now free from fever—tongue cleaning rapidly, but rather red—papillæ elevated—skin cool and perspirable—eyes still yellow—bowels open. Ordered enemata pro re nata; fomentations to abdomen.

15th. A chill succeeded by fever to-day, with general distress—is very fretful—much thirst—respiration rather laborious—when the fever goes off, appears quite lively, and walks about. ℞. Hot pediluvium, with mustard; cold fomentations to abdomen, and cold enemata.

16th. Had the chill as usual this morning—has now some fever, but less than usual. Treatment continued.

17th. Some tenderness on pressing epigastrium—otherwise as usual. Ordered cups to epigastrium.

19th. Chill—has now fever—pulse full and rather tense. V. S. ℥vi. Treatment continued.

20th. Every day the chill and fever are delayed to a later hour. Diet restricted.

25th. Chill lessened in duration—has no fever. Diet, soup and milk. ℞. Sulph. quinine, gr.xij. Sulph. acid. q. s. Aq. puræ, ℥vj. M. ℥ss. q. b. h.

30*th.* Convalescent. No chill or fever. Diet increased—soup, milk, sago, &c.

Observations.—The intermittent type was assumed in this case, yet the organic lesions were evidently high gastric irritation, which, on his admission, had been irradiated to the cerebral meninges.

In its essential characters, the disease of Lee was similar to remittent fever; and from the jaundiced state of the eyes and skin, that appeared on the 11th, the irritation was communicated to the biliary ducts, giving it a disposition towards bilious fever, as it is termed. The type the irritations assumed, was not attended to in the commencement. The treatment was directed to the organs affected, and the condition in which they existed when the organic irritations were controlled, and the febrile paroxysms subdued, the sulphas quinæ was resorted to, and secured the patient from a recurrence of the paroxysms.

Case XII. *Typhus Fever—Gastro-Meningitis.*—William Lynch, aged forty-five, pedlar, was admitted into the Men's Medical Ward, Sept. 26th. In August had attack of fever while peddling along the Schuylkill—became better after two weeks confinement—attempted to return home, and was compelled to lay by at a tavern on Lancaster road —was sick six or eight days, and was attended by a physician of the neighbourhood. Got somewhat better and came on to the city. Becoming worse, entered the infirmary. Has lost one eye from an injury; the other has been much affected. Is a free drinker. Symptoms on admission; much general debility—pulse small and feeble—skin dry and parched—eye much injected and watery—some stupor—answers questions reluctantly—tongue very tremulous, white, and furred, but broad and moist—bowels open. ℞. Ammoniated julep, ℥ss. q. b. h. Wine whey in intervals.

27*th.* Sinking—debility greater—pulse weak and frequent—stupor increased. Blister to nape of neck.

Night. Eye very red and injected—much head-ache. Cold water to head; sinapisms to extremities.

28*th.* No better—pulse rather fuller. Ordered brandy punch; porter and water; soup and sago as diet. Other treatment continued.

Night. Cerebral symptoms increasing—comatose—seldom speaks, unless spoken to—voice very indistinct—skin rather moist. Blister to head.

29*th.* Has retention of urine—otherwise same as before. ℞. Sp.

nit. dulc. ʒj. in flaxseed tea, q. ½h. Carb. ammon. discontinued, and punch.

30th. Leeches applied behind the ears—slight change for the better—speaks more willingly—opens his eyes—pulse risen somewhat—skin dry and harsh. ℞. Calomel, gr. ss.—ipecac. gr. ¼—opii, gr. ⅛. M. ft. pil. q. b. h.; wine whey continued.

October 2d. Perspiring freely—feels better—pulse soft, full, and regular—bowels in good condition—tongue moist and cleaning—eyes less red. ℞. Cort. cinchon. ℥j.—Serpentaria, ℥ss. M.—one pint of boiling water—wine-glassful, q. b. h.

3d. Improving. Says he is quite another man—pulse soft, full and regular—perspires rather profusely—coming on always after taking wine whey, which is now used sparingly. Treatment continued.

4th. Doing well—tongue cleaning rapidly, moist, soft, and elastic to the touch—gums slightly touched—skin moist and soft—eye clearer. Milk and gruel in the morning, and soup during the day. Uses gargle of sage tea, borax, and honey, p. r. n.

5th. Quite cheerful—gums quite sore—discharge from them increased. Gargle of solut. borax and myrrh.

7th. Doing well—diet increased.

23d. Convalescent.

Observations.—Lynch has been an invalid for some years, and was, on his admission, in what might be considered the last period of the fever, with which he had been attacked on the Schuylkill. The symptoms that presented themselves at that time were of opposite character, and demanded a contradictory treatment. The central organ and the forces of the circulation were in a state of debility and apparently failing. Stimuli of an active nature were required to maintain their powers—at the same time symptoms indicative of meningeal inflammation were present. On the 29th, when the vigour of the circulation had been restored, but with increase of the cerebral symptoms, twelve leeches were applied behind each ear, and all the stimulants except wine whey were withdrawn—an immediate amendment ensued. The prescription of the 30th was ordered with a view to excite perspiration. This effect was induced, and, subsequently, a slight ptyalism was brought on. No gastric distress was manifested by Lynch.

CASE XIII.—*Gastro-Entero-Cerebro Colitis.*—Mary Ann Ketler, aged ten years, was admitted into the Women's Medical Clinical Ward, Aug. 22d, 1827. Person delicate—temperament nervoso-sanguine—

complexion fair—hair light colour—eyes blue—has been sick three or four weeks. The physician under whose care she had been, gave the following account of her disease and treatment. The fever, at first intermittent, became continued. An emetic, followed by several active purgatives was prescribed. A cerebral affection supervened, attended with derangement of mind, entire loss of sight and hearing, great stiffness of the cervical muscles, &c. To meet these symptoms, a blister was applied to the head, and repeated. The fever subsided, and a prostration supervened. The sulphate of quinine, carb. ammon. and wine were given, and continued for four or five days, when fever recurred. Since which she has been using pulv. Doveri and acetat. opii, gtt. ij. q. b. h. to quiet irritation.

Symptoms on admission.—Emaciation considerable—delirium incessant—screams violently, from pain—pulse irritated, frequent—skin hot—tongue pointed, red on edges, white fur on surface, dry—abdomen depressed, renitent, painful, when pressed, in every part, especially epigastrium and iliac regions—face flushed, particularly the cheeks. Latterly gangrenous spots and petechiæ have appeared. She also has a large sloughing ulcer over the sacrum. When not screaming, lies moaning—has colliquative diarrhœa. Ordered injections of laudanum and mucilage, pro re nata, and fomentations to abdomen; barley water, acidulated, for drink, and arrow-root mucilage for diet.

23*d*. Delirious all night—talking and screaming incessantly. The patients in the ward were so much disturbed by her, she was removed to a separate room. The diarrhœa appeared checked by the injections. Bowels opened this morning after an injection—stool dark and thick—symptoms as yesterday—more heat of surface. Ordered twenty leeches to epigastrium and twenty to back of head; cloths dipped in cold water to head and epigastrium; mucilaginous injections, cold. A circular perforated pad to sore on sacrum.

24*th*. Raved last night till one A. M.—much thirst during night—had a dark stool this morning—tongue rather cleaning—lips and gums very dry—pulse very small, quick, and frequent—low muttering delirium, with much peevishness—skin cold and damp—small blue spots over body. Ordered warmth by fomentations and bricks. Afternoon.—Reaction taking place—skin of natural temperature—more quiet—pulse less irritated. Night.—Some exacerbation of fever, but she is more rational—has had a copious dark stool. Ordered twenty leeches to epigastrium.

25*th*. Seems better this morning—passed a tolerably good night—

skin natural—tongue cleaning—bowels open—her pulse still irritated and corded. Treatment continued. Night.—Much better—reposes quietly, and is rational—no fever—pulse the same.

26*th.* Rested badly last of night—better this morning, quite rational—the nurse was induced by her entreaties to give her a small piece of light bread to eat—she complains much of hunger—tenderness at epigastrium lessened—bowels open, stools not so dark—the pupil of eye has become natural. Treatment continued. Night.—Pulse improved—stools nearly natural—allowed a few spoonfuls of sago.

27*th.* Very restless, fretful, impatient, was delirious in the night—pupil again dilated—pain in head and epigastrium—tongue and pulse improving—sore on sacrum looks clean and healing under the bread and milk poultice—petechia have disappeared—her shoulder pains her very much—the muscles of abdomen very tense, she lies with her legs drawn up to relax the abdominal pressure—has no great thirst. Ordered twenty leeches along longitudinal sinus. Night. Warm fomentations to abdomen—is calmly sleeping—bowels not open to-day—drinks chicken water.

28*th.* Rested badly—bowels open last night—pulse small and tense—pupil still dilated—does not complain of her head—tongue rather dry—sores have healthy appearance. Ordered new milk and water. Night. Has passed a bad day—frets much, and complains of her head—gastric uneasiness decreased—bowels not opened. ℞. Calomel, grs. iv.—ol. ricini, ℥ij.

29*th.* Had a better night—sleeps calmly this morning—bowels open—stools natural—pulse improved—likes her milk and water.

30*th.* Rested well—pulse and skin favourable—still moans and complains of pain in her abdomen. Ordered emollient injections through the day, and an anodyne injection at night; treatment and diet as usual. Night.—Pretty quiet. A small portion of bread and butter allowed, as her incessant craving for it seemed to irritate her—bowels natural.

31*st.* Rested well—legs drawn up to relieve tension of abdomen—pupil still dilated—tongue and pulse good—eats with appetite—stools natural in colour, but offensive. Ordered blisters to back of ears. Night.—Blisters drew well—pupils of eye natural—has ceased to moan—doing very well.

September 1*st.* Rested well—pupil again dilated. Night.—No change in treatment—very fretful during afternoon—more calm at night, and disposed to sleep.

2*d.* Slept but little—is rational, but peevish—her stool this morning contained a portion of blood—pupil less expanded—tongue has become moist, clean, and natural—pulse natural—appetite good. Night.—Another stool, but no blood with it—her fever high—the bread, butter, and milk are stopped. Ordered lemonade.

3d. Symptoms very favourable—pulse, skin and pupil of eye natural—diet allowed again. Afternoon.—She was this day removed back again to the clinical ward—her pulse became excited, and considerable fever was manifested—diet again stopped—body sponged with cool water—fever abated towards night.

4th. Not so well to-day—bowels too loose—stools are dark and offensive. Ordered twelve leeches to the iliac region, and six to margin of anus. ℞. ʒi. of oil. Opiate injections. Seems a little better.

5th. Better this morning—rested well—tongue, pulse, and pupil natural—had a slimy passage during the night—takes milk for diet. Ordered cold injections of mucilage with laudanum.

6th. Rested badly—she seems under the effect of the opiates—has had frequent bloody and mucous stools. Pulse failing. Ordered weak wine whey. Opiate injection continued.

10*th.* After the sixth instant she gradually declined—suffered severe pain—abdomen excessively tender—her pulse became weak, irritated, frequent, and quick—her skin hot—colliquative diarrhœa with bloody discharges—frequent vomitings. This day she died. —Case recorded by Mr. HALL.

Abdomen only examined.—Autopsis eight hours after death—much emaciation—abdomen retracted—superficial veins very visible. Peritoneum healthy in every portion. Stomach—mucous membrane of natural consistency—colour white—contained a large quantity of fluid—her drink. Duodenum and jejunum presented a healthy structure and aspect. Liver and kidneys of natural appearance. The ilium, as it approached the colon, was inflamed, and exhibited numerous laminæ of various sizes, mostly oval-shaped, elevated a line above the surface, many of them ulcerated, especially in the proximity of the cœcum; edges of the ulcers ragged; contents of ilium were a blackish mucus. The mucous coat of colon and rectum were covered over with a bloody mucus, the sanguine appearance increased in descending; in the ascending colon and arch the mucous tissue not red, but of deep red in the lower portion and rectum. When washed it was found to be riddled like a sieve with perforations, and extensively pitted. The perforations penetrated only through the mucous tunic, the others were unaffected.

Observations.—The symptoms manifested by this patient on admission, and the duration of the disease, which had constantly progressed in its unfavourable tendency, precluded almost every expectation of affording even a relief to her sufferings, much less a recovery. From the intensity of the cerebral symptoms, I apprehended, at first, the immediate danger to be disorganization of the cerebral structure. It is to be observed that no spasmodic contractions, no rigidity of the muscles, the concomitants of meningeal inflammation at the base of the brain existed; neither was the adnata injected, nor the eye affected in its movements—rolling in its socket, and turned upwards, as occurs from the same cause. No tendency to stupor was at any time observable; on the contrary, the mental faculties were too active—wakefulness was a troublesome symptom—delirium was acute, accompanied with talkativeness. From these symptoms, I concluded the sympathetic irritation, was not developed on the meninges, so much as the anterior lobes of the brain, or at least, if they were involved, it was only the arachnoid and pia mater, covering the superior portion of the anterior lobes of the cerebrum.

All apprehensions from this source were soon dissipated from the mitigation so speedily induced in the cerebral symptoms, by the discontinuance of the stimulants and narcotics, and the adoption of the physiological treatment directed to the organs affected. As the cerebral disorders moderated, it became evident, that danger equally formidable, though more remote, threatened our patient from the phlogosis existing in the alimentary canal. As far as the stomach was concerned, our fears were soon allayed. The tongue became moist, clean, and lost its pointed shape and scarlet hue. The appetite returned, was even sharp, and digestion good. The renitent state of the abdomen, which was sunk in and depressed; its extreme sensitiveness to pressure in the iliac regions, and track of the colon; the diarrhœa that existed on admission, and which continued to recur at intervals; the legs drawn up to relieve the abdominal contents from muscular pressure; the progressive emaciation notwithstanding the restored state of the digestive functions; the persistance of an irritated pulse, and a husky skin, indicated, too plainly to be misunderstood, an extensive and aggravated intestinal inflammation, (entero-colitis.)

In observing on this case to the class, I remarked in the commencement of the treatment, that inflammations of so many organs, of such extent and continuance, could not be eradicated at once, as in recent cases, by active depletion—the general forces of the patient requiring to be managed—but that the different active phlegmasiæ, then existing, were to be reduced, by local and appropriate means, below the point of immediate disorganization; that they were to be converted into chronic inflammation, which might be removed by regimen and revulsives; and that such would be the object I proposed in the treatment.

For a few days the melioration of the condition of the patient, almost led to a hope, that such a result would be accomplished—it was soon abandoned, and instructed by frequent autopsical researches, when similar abdominal symptoms have existed, I announced ulceration of the ilium and colon to have taken place.

In this case, displaying a formidable train of morbid phenomena, the decided, unequivocal impressions made by the physiological system of treatment, are too obvious to be denied. This patient, under a different system, had proceeded from bad to worse; and the first appearance of amendment or check to any of the symptoms, in a period of three weeks, was immediately consequent on the institution of local and general debilitants of irritative actions. They are too well connected to be considered as mere accidental concomitants, and have the connexion of cause and effect. Had the same plan been adopted in the commencement of the disease, when, in so many instances, it is alone susceptible of cure, a very different fate, it is fair to presume, would have awaited this unfortunate little girl.

A circumstance in this case requires to be noticed. While treated by stimulants and Dover's powder, petechiæ appeared on the surface, and sloughing on the sacrum. These are supposed to be signs of debility and a putrid tendency, and to require tonics and stimulants. But soon after the antiphlogistic system, the local depletion, demulcents, regimen, &c. was commenced, the petechiæ disappeared, the sloughing ceased, the ulceration assumed a healthy aspect and began to heal.

The brain was not examined, in consequence of a difficulty having been made to open the body. I was determined to verify the condition of the abdominal viscera, and removed them entire. I never before met with the kind of ulcers that existed in this colon. There were many thousands, none larger than small shot-holes, and appeared to be formed by the destruction of the mucous follicles that are disseminated in the colon. In the ileum where the follicles are agglomerated together, they formed, as they usually do when enlarged by inflammation, circumscribed laminæ elevated but flattened on the surface. Those near the ileo-cœcal valve were ulcerated; ascending up the ileum, the ulcerations disappeared, and, finally, the lamina. The structure of the stomach corresponded with the symptoms that announced its restoration to its healthy functions; it was perfectly natural.

Case XIV. *Gastro-Entero Colitis.*—Christian Deelar or Teilher, aged thirty-two, a German, fair complexion, light hair and eyes; a labourer in a brick-yard; admitted into Men's Medical Ward, August 31st, 1827. He has not been in good health for some time past, but was confined to bed only four days previous to his entrance into the infirmary.

Symptoms on admission, were fever—head-ache—flushed face—short and laboured respiration—tongue foul—bad taste and clamminess of mouth—thirst—pain in abdomen—diarrhœa.

Treatment.—V. S. ℥vi.; cold applications to head; cold mucilaginous injections; barley water acidulated, for drink.

September 1st. Fever—pulse active—respiration hurried—abdomen sore to pressure—bowels very loose. Treatment.—Cups to abdomen—V. S. ℥vi.—fomentations to abdomen; cold applications to head

2d. Bowels continued loose in the night; are in better order to-day—pulse frequent and irritated—respiration short and hurried—pain in head.

Treatment.—Cups to head; continue injections and cold applications.

3d. Pulse more excited—bowels again very loose.

Treatment.—Thirty leeches to epigastrium, ten to margin of anus; fomentations to abdomen and cold injections continued; feels much better after leeching.

4th. Apyrexia—appetite, asks for food—diarrhœa checked—complains of dimness of sight and dizziness of head.

5th. Was somewhat delirious in the night—no fever—asks for food and allowed some gruel—was easy, and appeared doing well during the day—respiration continued short.

10 P. M. Was suddenly seized with violent pain in lower part of the abdomen; his outcries disturbed the whole ward. He attributed his suffering to suppression of urine. Anodyne injection and warm fomentations to abdomen. An attempt to pass a catheter failed; he was put into a warm bath, after which the instrument passed with facility. Not more than a gill of urine was obtained. He felt somewhat relieved, and near midnight got some sleep.

6th. Pain returned with great severity early this morning, and increased rapidly. At 8 he is quite prostrated—extremities cold—pulse barely perceptible—respiration laborious—stimulants external and internal were freely administered, but without effect—he expired at 9 o'clock. Case recorded by Mr. Betner.

Autopsy.—Thorax and abdomen examined. The pleuræ, lungs, bronchiæ, and heart, exhibited a perfectly natural condition. In abdomen the peritoneum was extensively inflamed, which was most intense in the lower portion; that spread over the stomach, liver, and spleen was not affected. The convolutions of the intestines, where they were in contact with the parietes, so that the two peritoneal surfaces were in apposition, presented a high degree of inflammation. In the cavity was a yellow fluid, in which was intermixed fæcal matter. The liver perfectly healthy; the mucous coat of stomach natural thickness and consistency, of a dull white colour; duodenum similar, and jejunum also; they contained a yellowish, thick, semi-fluid matter, the colour derived from the bile; descending along the track of the small intestines, about their middle, capillary, arborescent injection began to appear, and the contents were a thin and bloody mucus. Further on laminæ were met with; they were elevated above the surface, of an oval shape, granular to the feel, of a pink colour, and offered considerable resistance to the scalpel. Proceeding on, these laminæ or plates were more numerous, and of larger size; some were an inch and an half to two inches in length, and from a fourth to half an inch in width. The mucous tunic was of deep port red, and mucus contained in this part highly sanguineous. Six inches above the ileo-cœcal valve, the laminæ had ulcerated—some were in a gangrenous state, soft and black, with ragged edges. One had perforated the intestine completely. From this to the cœcum, all the laminæ were in a similar state, and three other perforations had taken place. The ileocœcal valve, with the whole mucous coat above it, was black, disorganized, in fact putridinous. The colon through its whole course was intensely inflamed and exceedingly rugged and thickened. It contained bloody mucus. The cœcum, part of ascending colon, the lower portion of descending colon, and rectum, were covered over with ulcerations of various sizes, but none of them gangrenous.

Observations.—Teilher did not give an explicit account of his previous condition, except that his health had not been good for some time anterior to his present confinement to bed. It is most probable from the extensive morbid condition of the colon and ilium, he had been affected with chronic ilio-colitis, on which supervened acute inflammation.

The general symptoms on admission were those that usually characterise remittent fever; but on the subsidence of the gastric irritation, and the return of appetite, the febrile symptoms disappeared, and an apparent amendment ensued. The same circumstance was noticed in the preceding case, (Mary Ann Ketler,) and I have repeatedly observed it in similar cases. It arises from the less active sympathy between the heart and the mucous tunic of the small and large intestines, than between the heart and the mucous tunic of the stomach. As soon as the gastric irritation is controlled, the sympathetic irritation of the heart ceases, and *the symptom called fever*, disappears from the train of morbid phenomena. Notwithstanding the absence of this symptom, disorganizing inflammation may continue in a large extent of the ilium and colon, and the condition of the patient is not the less critical, though apparently improved. These facts give support to the principle of Broussais, that the symptom of fever does not occur in disease, without the previous development of irritation on the gastric mucous membrane.

The perforation of the bowels in this case, was the result of the ulcerative process and gangrene combined. The escape of the intestinal contents into the peritoneal sac produced its inflammation, that became the immediate cause of death. Perforation of the intestines ensues sometimes in a totally different manner; it is independent of ulceration or gangrene, but is a softening of the structure. It is a vice of nutrition, in which the atomic or molecular forces that govern the combination of the animal elements, appear to cease or be perverted, and a discontinuity of parts succeed. This kind of perforation is often seen in the stomach, and is more frequent in children than adults.

Case XV. *Cerebro-Hepatic Congestion.*—John Wilson or Nelson, admitted into the Men's Medical Clinical Ward, October 1st, 1827, aged sixteen years, light complexion and hair, addicted to intemperate use of ardent liquors.

This patient was brought to the house in a wagon, by an innkeeper residing on the Schuylkill, who mentioned that two days previous he had found this lad early in the morning lying on the steps, in front of the house, where he had lain all night. Finding him to continue very ill, he had brought him into the infirmary.

From the patient the information collected was, that he had been complaining and unwell for two weeks, that he had come down the Schuylkill from Mount Carbon in a coal boat, in which he was exposed night and day to the weather, and that he was in the habit of drinking from two to three pints of whiskey per diem.

Symptoms at the time of admission were complete torpor of mind and body—skin pale and cold—bluish hue around mouth and neck, from the stagnation of the circulation and settling of the blood—respiration feeble—pulse barely perceptible—pupil of the eye contracted to a small point. The most powerful and diffusible stimulation internal and external was immediately put in requisition, as hot brandy and carbon. ammon.; warm bricks to different parts of the body; frictions with hot ol. terebinth.; sinapisms, &c.

In the course of three or four hours reaction was awakened—the pulse rose—the skin became warmer, and he could be roused from his stupour for a short period—when the preceding statement was obtained from him—head was shaved, and four cups applied, followed by a sinapism—the reaction became considerable during the day, but in the night he suddenly sunk and expired.

Examination next day, twelve hours after death.—Body not emaciated, skin of pale straw-colour—no discoloration from settling of blood—face bloated—no rigidity of muscles—limbs round, well formed—chest large.

Head.—Vessels of scalp turgid with blood, from which half a pint escaped and was collected. When the skull-cap and dura mater were removed, the brain appeared through the arachnoid of purple ash-colour. The arachnoid was of a faint opal white—no effusion of serous fluid existed in the arachnoid or beneath it—the vessels of the pia mater loaded with blood—the exterior of the cortical substance was of a *deep purple colour*, which seen through the arachnoid had appeared of an ash tinge. The interior of the cortical substance was of a hue approaching a *dark mahogany*. An alteration of the colour was observable after exposure to the air for a short time—it assumed a lighter tinge, and was more bordering on red. This effect was doubtless produced by the action of the air on the blood in the congested capillaries.

The white medullary substance had a faint rose tinge, with numerous red points from divided vessels. The cortical or grey substance of the interior in the corpora striata, and thalami, was similar in colour to the external—choroid plexus deep red.

When the cerebellum was divided, the grey or cortical substance of the arbor vitæ, projected the extent of a line to a line and a half beyond the medullary, as though it was compressed, and had the same deep mahogany colour as that of the cerebrum.

The ventricles contained only ʒii. or ʒiii. of reddish serous fluid; the substance of the brain generally was firmer than usual.

Thorax.—Heart natural size and density—right auricle and ventricle distended with blood, but not as much as is often met with. The lungs healthy, crepitating, natural colour—collapsed when the thorax was opened—settling of blood at posterior portion.

Abdomen.—Peritoneum healthy--liver large--structure natural, colour deep purple; blood followed the scalpel in a stream, wherever an incision was made. A portion washed in water for a few minutes by the escape of the blood had its hue lessened and a yellow tinge was perceptible. Spleen very large and solid—weighed from seven to eight pounds. Mucous coat of stomach natural thickness and consistency—had brown hue, with slight redness—that of intestines was quite natural.

Observations.—This case from its symptoms and the autopsical examination, appears to me to illustrate very finely, a morbid state of congestion independent of inflammation; a condition of the organs, respecting which much is said and written, but of which I have met with very few examples.

Wilson, on his admission, was in a complete torpor, or adynamic state. All the vital energies were in collapse. The muscles were relaxed; in whatever position the limbs were placed in, that they remained. There was no starting of the tendons, not a sign to indicate irritation of the motorial nervous power. The respiration was not laboured or hurried, but calm and feeble, a direct proof that the nervous respiratory apparatus was not acting in excess. The intellectual faculties were dull, almost to complete torpidity. It was with great difficulty, we could rouse him to a few moments of attention, from which he immediately relapsed into his previous stupor. All the functions of animal life were prostrated.

The functions of organic life were equally depressed. The circulation, general and capillary, was feeble, and animal heat reduced. They were, however, capable of being roused by stimulation, though their actions could not be long sustained.

The morbid condition of the organs corresponded to the morbid phenomena that were exhibited. In the cerebrum, the cerebellum, and the medulla oblongata—the principal organs of animal life—a congestion of sanguine capillaries existed to a degree I have never before witnessed. I exhibited, a few hours after the examination, to my friend Dr. Horner, whose familiarity with the human structure, both natural and morbid, is generally acknowledged, a portion of the brain, on account of the peculiar appearance of its cortical substance. It was the first instance of the kind he had met with. The absence of effusion from the arachnoid or any marked change in the texture of the brain, are strong evidences that inflammation had not previously existed.

What is remarkable in this case is, that the lungs, the most vascular of all the organs, were exempted from congestion, while it existed in an intense degree in the nervous system, the liver and spleen. This circumstance is to be accounted for by the excessively intemperate habits of this lad, and illustrates an important pathological principle. The brain, the stomach and liver, are the organs that especially experience the stimulation of alcoholic liquors. In Wilson they were, from this cause, in a state of prolonged or chronic irritation, and the most irritable of his organs. When, from the impression of cold on his surface, or from other causes, the blood abandoned the exterior capillaries, and was thrown into the interior, it was attracted, as it always is, under such circumstances, to the organs in greatest activity of organic action, or in a state of irritation. That the mucous tissue of the stomach, did not exhibit a higher degree of congestion, may have been occasioned by the excessive engorgement of the spleen and liver, which proved diverticula to the circulation of those organs. Had the bronchial mucous membrane or the sanguine capillaries of the parenchyma been the seat of chronic irritation from previous catarrh, or pneumonia, instead of the brain, liver and spleen, the pulmonary apparatus would have been the seat of the congestion, and hæmorrhage, or pulmonary apoplexy, or acute inflammation might have been the result.

In this manner the state of the organs from habits, professions, previous diseases, &c. modify the effects of the same agent on different individuals, and give rise to very different morbid phenomena. The fluids are uniformly attracted or determined to the organs whose actions are habitually excited, or are in a state of irritation, and hence result congestions, hæmorrhages, effusions, inflammations, &c.

CASE XVI. *Colica Pictonum.*—David Graham, aged thirty, lead-beater, was admitted into Men's Medical Ward, October 8th, 1827. His habits were temperate; he had been engaged some time at Wetherill's factory in preparing white lead, and other matters relative to that business. Had been affected with violent colicky pains and constipation, for which he had been salivated, and for a few days was relieved; on 4th inst. relapsed, and was seized with much pain in the region of the stomach, and afterwards in the pubic and umbilical regions. The pain was sharp and lancinating, with a sensation of twisting about the navel; bowels had been very much constipated, and he suffered much pain when he tried to evacuate them. He has been under medical treatment, and was a second time placed under the mercurial treatment, purged freely, and blistered over the abdomen.

Symptoms on admission. Gums tender—breath mercurialized—periodical spasms of bowels, which are much constipated—tongue slightly furred and white—he has perfect use of his limbs—pulse full and active—skin moist and soft. Ordered ℞. ol. ricini ℥ss. twice daily; twenty-five leeches applied to anus; enema of senna tea.

9th. Has pain in side and epigastric region. Ordered cups freely to side, &c.—oil continued.

10th. Pain in bowels greatly relieved—freely moved—has little or no pain. Treatment continued. Prescribed light, mild, nutritious diet, as thin soup, milk, &c.

Afternoon. Occasionally has pretty severe pain—pulse rather full and tense—skin dry. V. S. ℥viij.

15th. Continues in convalescent state—bowels regular. Treatment continued.

20th. Suffers little or no pain—bowels open—discharged cured.

Observations.—This case, recorded by F. Horner, senior student, was one of colica pictonum, less violent than most of those usually brought into the infirmary. Though not a very aggravated form of the disease, the mercurial treatment, and salivation, twice induced, failed to accomplish a cure.

Colica pictonum presents two groups of symptoms wholly dissimilar—the one is connected with irritation of the gastro-intestinal mucous membrane; the other rally round an irritation of the apparatus of the nervous organs. This irritation is, most probably, for positive data are wanting to verify the fact, primarily seated in the ganglionic system, but very often extends to the motorial nervous organs—as is evinced in the spasmodic contractions of the voluntary muscles that are sometimes seen, as well as the spasms of the involuntary muscles, and the paralysis so frequently sequent to it. According as the one or the other irritation is most predominant, the symptoms vary, and a modification of the treatment is demanded. In Graham, the order of nervous symptoms was not very obvious. None existed in the apparatus of the voluntary movements. The local depletion by cups to the abdomen, and leeches to anus, with restricted diet, had a most prompt effect in abating the symptoms. Previous to his discharge he had been walking about the ward for some days, without any appearance of a return of the disease.

A severe case of colica pictonum was brought into the infirmary last winter, which was witnessed by the clinical class. The period of the disease was advanced, and the intestinal disorder was abated. The nervous morbid phenomena were predominant. Pain in the back and shoulders, and in the extremities was excruciating, and the lower extremities were in a state of incomplete paralysis. He was unable to sustain himself on his feet. In this case the efficacy of local depletion was most strikingly manifested. He was cupped along the spine, which, in a short time, completely removed the pain, and restored the power of the muscles of the lower extremities. Pain and inability of motion remained in the superior extremities. It was so excessive in the left arm, the patient declared he would consent to have it cut off. Mr. Ashmead, the senior student of the ward, finding the cups had relieved the pain in the back so effectually, applied them along the arm; an immediate relief was procured, and by a persistance in a regimen, with reiterated local depletions, the whole of the morbid nervous phenomena disappeared, and he was discharged cured.

Case XVII. *Gastro-entero-colitis.*--Metfield, a black, admitted into Black Men's Medical Ward, September 21st, a labourer, habits intemperate, frame athletic. He had been attacked, eight or ten days previous, he said, with chills, had been sick at stomach, and had fever. He appeared exceedingly dull in intellect. At the period of his admission he had no fever, and made no particular complaint—the adnata slightly yellow. On the 23d, in the evening, Mr. Horner, senior student, found him sitting up; he wished to have a purge of calomel and jalap, but as his bowels were open, it was refused him. Early on morning of 24th, he had epistaxis; at eight o'clock went to the close stool, returned to his bed, and in a few minutes expired, without a groan or struggle.

Examined twelve hours after death. Body—no emaciation; head not opened; the white tissues were coloured yellow; thorax—lungs, and pleuræ natural, except some old adhesions; heart natural size; left cavities distended with blood, contained soft coagula; lining membrane spotted red.

Abdomen.—Liver natural—gall-bladder small, contained chiefly mucus coloured with bile. Stomach—no exterior marks; mucous coat morbidly thickened and hardened, gritted under the scalpel, was covered with tenacious, viscid mucosity, which, when scraped off, was bloody; the contents of the stomach were a bloody serous fluid; the follicles or mucous cryptæ of the mucous tunic of the stomach were enlarged, of a bright red, and studded its surface in small projections, resembling the papillæ of an inflamed tongue; the colour of the membrane violet.

The follicles throughout the small intestines were in a similar state. The jejunum contained a considerable quantity of thin brownish-green mucus. When removed from the mucous membrane, this was found injected with blood, of a violet colour, and felt granular from the enlargement of its cryptæ; following the course of the intestines, approaching the ileum, the mucus became bloody. The ileum, colon, and rectum, were loaded with a bloody mucus, having the colour and consistency of currant jelly. The mucous tunic of ileum was of deep red, with the capillaries beneath highly injected. Laminæ were formed on its surface, but no ulcerations. The mucous coat of colon was similar to that of the stomach, very much thickened, hardened so as to resist the scalpel, and gritted under its edge. It appeared to be the first step towards the transformation into cartilage, a degeneration of structure occasionally met with in the mucous tissue.

Observations.—Metfield entered the infirmary in the last period of what might be called a remittent bilious fever. During the last fall, a fever of this character was almost epidemic amongst the blacks of the city and suburbs. The sympathetic disturbances of the circulatory and nervous organs had subsided, an occurrence by no means unusual in this form of disease, when the patients appear to those who have not witnessed the course of the disease, or known its history, to be scarcely the subjects of medical treatment. I was called last September to see a gentleman, whom I found dying with black vomit and other symptoms of yellow fever. He had been ill six days, and the day previous to his death, he left his bed, went down stairs, took dinner with his family, and was considered by his attending physician, who had congratulated the friends of the patient, on what he considered a rapid recovery, as convalescent, until the appearance of the fatal signs—black vomit—cold sweats and sinking pulse—assured him of his error.

The examination of Metfield exhibits a condition of structure frequently observed, and which is the indication of a morbid state, generally terminating in a fatal manner. The thickening, the hardening, the approaching cartilaginous transformation of the mucous membrane of the stomach and colon, are not to be attributed to recent disease. It is the consequence of chronic inflammation, long sustained, producing a vitiation of nutrition. The diffused redness of the villi is to be referred to the same cause. But the swelling and redness of the cryptæ, the capillary injection, with the bloody mucus poured out into the stomach and intestines, were the consequence of acute inflammation superinduced on chronic inflammation, and in a structure that had undergone a morbid alteration. The vitality of a structure that has degenerated is always enfeebled, and it perishes very rapidly under excitement of its organic actions. Whenever acute inflammation is occasioned in a mucous membrane thus affected, phagedenic ulceration and gangrene are the most usual result. In Metfield this degree of destruction did not occur, but the extensiveness of the morbid change and activity of the inflammation, occupying the track of the alimentary canal, from the œsophagus to the anus, speedily broke down the vital forces of the system.

In this case, we have another evidence of the existence of acute enteritic inflammation, always most fully developed in the lower portion of ileum, in idiopathic fevers, so called. This fact cannot be too strongly impressed on the minds of practitioners, who should never lose sight of it in their method of treatment.

The cases that have been detailed, will serve to give an illustration of the physiological treatment of diseases; and the dissections will show the structures chiefly concerned in febrile diseases, with the pathological condition in which they consist. In the next number of the Journal, the subject will be resumed, and additional cases with autopsical examinations be given, with a view to determine the seats, the character, and nature of various diseases.

ART. V. *Successful Case of Ligature of the Internal Iliac Artery, for the cure of Gluteal Aneurism.* By S. POMEROY WHITE, Surgeon, Hudson, N. Y.

IN the early part of October last, Jacob Van Volkenburg, aged sixty, by trade a tailor, came to Hudson for the purpose of obtaining surgical advice. He presented to our view a tumour about the size of a child's head, located upon his left hip directly over the sciatic notch. He stated that it was of ten months standing, and that he experienced no pain from it. His general health had been good, except that he suffered from rheumatism. Upon making an examination of the tumour, the skin was found not discoloured, fluctuation was perceptible but there was no pulsation. The absence of the last symptom rendered it difficult to decide upon the nature of the case, and accordingly we postponed giving an opinion until a consultation could be held with his family physician, Dr. HICKS, of Columbiaville. The doctor stated that the tumour could be removed by pressure, when small, but, from other cases he had seen of a similar kind, he presumed that it contained pus. He proposed opening it, and as that was the only way of ascertaining, unequivocally, the nature of the disease, we acquiesced. He accordingly punctured it, and nothing but florid blood made its appearance. A probe was passed in, and an aneurismal sac was found, about five inches deep. It was also discovered that the parietes of the sac were very firm and unyielding, which accounted for the absence of pulsation. After allowing a pint of blood to be discharged, the orifice was closed with a suture and adhesive plaster. It was observed that after this and also subsequent discharges of blood, that the sac would fill again and the tumour resume its usual dimensions. The disease was supposed to be produced by repeated falls upon his left nates. He was a man of rather intemperate habits, and, when stupified by liquor, would fall, as they expressed it, like a log. Being also lame in his left limb, from rheumatism, he, consequently, was most liable to fall upon his left nates.

The consultation board having unanimously concluded that the disease was aneurismal, it then became a question whether it was most for the interest of the patient to tie the gluteal or internal iliac artery. As a precedent for the former, we had Mr. JOHN BELL's famous case. In that, with all his dexterity, he barely succeeded in saving his patient, in consequence of the hæmorrhage, though some allowance must be made for his usual hyperbole. My father, also, stated in the consultation, that he had been under the necessity of tying the gluteal at the notch, but under the existing circumstances of this case he would not recommend that operation. Indeed, the inability of compressing the artery above the disease, the possibility of the patient dying of hæmorrhage before the artery could be secured, and the probability of the artery being diseased within the notch, were insuperable objections to tying the gluteal. On the other hand, we had an encouraging although a solitary* precedent, in the case of Mr. Stevens of the island of Santa Cruz. There the disease was the same and the application of a ligature to the internal iliac proved successful. The operation of tying the internal iliac was accordingly concluded upon, though the patient's age was considered as a circumstance that would operate against its success. He at first declined having the operation performed, but as profuse hæmorrhage repeatedly supervened, he became weak and alarmed, and requested us to pursue whatever course we deemed most expedient.

On the 23d of October he was laid upon the table, and an incision was made of a semi-circular form, commencing two inches to the left of the umbilicus, and ending near the external ring. It was seven inches in length, and the convexity of it was towards the ileum.

After dividing the skin, cellular substance, and superficial fascia, it became necessary to secure a few small arteries. The tendon of the external oblique being exposed, was next divided, and then the internal oblique and transversalis with its fascia. The peritoneum, which now presented, was detached from the iliacus internus and psoas magnus muscles, with the fingers, and was pressed with its contents towards the right hypochondriac region, by the assistance of my father. The external iliac was immediately felt, and by passing the finger towards the sacro-iliac symphysis, the internal iliac was distinctly recognized. The artery was then exposed with the handle of the scalpel, and the ligature passed under with the Philadelphia needle, one inch from the bifurcation. Instead, however, of drawing up the needle part with the hook, I found it more convenient to take it with the dressing forceps. One ligature being passed, it was found necessary, from the great depth of the parts, (being about five inches,) to pass down the knot with Dr. A. E. Hosack's knot applicator. The ligature was then firmly tied, and the parts were brought together with sutures and adhesive plaster.

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* I have, since the operation, understood that the internal iliac has been tied by a Dr. Atkinson, of England, but without success.

In this operation the same difficulty existed as in the case of ligature of the common iliac, by my distinguished friend, Dr. Mott, of New York, viz. the constant protrusion of peritoneum from abdominal compression created by the struggles of the patient.

Some pain in the bowels, and fever came on a few days after the operation, which was removed by venesection and a laxative. Union by the first intention had taken place to a considerable extent at the first dressing on the eighth day. A considerable quantity of pus was discharged during the first four weeks, at the expiration of which time the ligature came away. The tumour has discharged its contents gradually, and the parts have assumed their natural appearance. The patient has so far recovered his usual state of health, as to be able to walk about his neighbourhood.

Hudson, N. Y. December 1*st,* 1827.

Art. VI. *On Superfœtation and Bipartite Uteri.* By James M. Pendleton, M. D. Lecturer on Midwifery, and Diseases of Women and Children, in the New York Medical Institute.

It may perhaps be considered by some, that the pages of a public journal, might be more usefully occupied in the examination of subjects of a more practical nature, but it should be remembered that in the investigation of every subject, facts are frequently unexpectedly developed, which, in their application, are extensively and practically important; I therefore trust the subject I have selected will not be without interest. The subject of superfœtation as a department of forensic medicine, cannot fail to interest every physician anxious to acquire a thorough knowledge of his profession.

By the term superfœtation is meant the impregnation of an ovum at a time when a previous ovum already occupies the cavity of the uterus. Whether this ever takes place is doubted by many; it becomes necessary therefore, in the first place, to establish the fact, before attempting any explanation of the mode in which it occurs. For this purpose I shall select a few well authenticated cases. In the Dictionnaire des Sciences Medicales, Art. Superfœtation, is related the following. Marianne Bejaud, aged thirty years, was delivered of a boy at her full time, April 30th, 1748. The labour was easy and natural in all respects, and she soon recovered, she remarked, however, what had never occurred in her previous labours, that there was neither lochial discharge, nor secretion of milk from the breasts. A short time after her confinement, she experienced sensations of motion in the abdomen; the singularity of this circumstance led to an examination, and a fœtus was discovered conjectured to be about four and a half months old. From this period the abdomen regularly increased in size, she had nausea, morning sickness, and all the symptoms of pregnancy until the 16th of September, when she was delivered of a girl, full grown, and perfect in all its parts. Under the same article, is a second case: Benoite Franguet was delivered of a girl on the 20th of January, 1780. After her confinement she had no lochial discharge, nor was there any secretion of milk; the abdomen remained larger than usual after delivery, and continued gradually to increase until the 6th of July, when she was delivered of a second daughter, apparently arrived at maturity. By a reference to the dates in these two cases, it will appear, that in the first the second conception took place four and a half months after the first, and in the second, three months and fourteen days after the previous one.

The following case is related by Madame Boivin, sage-femme de l'hospice de la Maternité in Paris. A woman, forty years of age, was delivered, at her full time, on the 15th of March, 1810, of a small child. The abdomen remained distended, and Madame Boivin supposed that there was some foreign body in the uterus. The hand was passed into the uterus, and the cavity was found empty. During two months the woman experienced motion in the tumour, and on the 12th of May she was delivered of a girl, small, weak, and who breathed with difficulty. This woman stated that she had not lived with her husband for a long time, and that the two children were the result of a connexion with another man, once on the 15th and 20th of July, and again on the 16th of September; it will be observed that these periods correspond exactly with the differences between births of the children.

These cases are sufficient to establish the fact of superfœtation, according to the definition which we have given it. Periodical journals are filled with cases which are erroneously described as cases of superfœtation of this kind, as the case related by Dr. Dewees, of a white woman who was delivered at the same birth of two children, one white and one black. What does the case prove? Nothing but that two ova became impregnated by two successive connexions at the same time by two individuals of different colours, and should properly be considered as a case of twins. The impregnation of two ova, in all cases, is probably the result of a distinct connexion, as it is well established that in cases of twins the children are rarely of equal size or apparent development. The same thing may be said of the case of the negress of Gaudaloupe, who was delivered at the same time of a black and a mulatto, she confessed she had connexion the same evening with a white and a black.

There is another case, not unfrequently met with, where an error exists in considering it as superfœtation. It is where at birth there are two children, one of which is considerably larger and more advanced than the other; or perhaps one is alive and perfectly formed, whilst the other is dead and very imperfect. Of this kind is the case related by Dr. Denman of the lady of Sir Walter Farquhar. When about five months gone, she experienced a most dreadful fright, and from that time the size of her abdomen began gradually to subside; on the 11th of February she was delivered of a fine though small girl. She continued in great pain and danger until the 25th, when she was delivered of a dead fœtus of about the age of four months. Instances are by no means rare of women being delivered of a full grown fœtus and at the same time of an embryo more or less advanced. Dr. Cossan, in his *Recherches Anat. et Phys. &c.* gives the following instances, "The wife of a surgeon at Amsterdam, was delivered of a well-formed child; ten hours afterwards, she discharged a small embryo having the umbilical cord filled with hydatids."

He relates the following, communicated by Mr. Percy, as a case of superfœtation, which may be taken as an example of the generality of such cases related in journals. A woman of Torrigny found herself pregnant for the third time. At four months, the motions of the fœtus were distinctly felt. These movements suddenly disappeared; at the end of about seven weeks they again re-appeared, and continued until the expiration of nine months, when she was delivered of a male child, small but active. After the delivery, the pains continued, and there was discharged from the uterus a black, soft, spongy mass, in the middle of which was a fœtus of four months. This, says Mr. Percy, is another example, to add to the others, of superfœtation. It is certainly more reasonable in this case to suppose, that at the commencement of pregnancy it was simply a case of twins, and that from some cause unknown one of the fœtuses had died and the other proceeded to maturity. There is also one more instance in which superfœtation is frequently described to have taken place, that is, where a female becomes pregnant at a time when she is labouring under an extra-uterine conception; the pages of our journals show that cases of this kind are by no means unusual; as a subject of inquiry we shall not consider them on the present occasion. With this limitation of our subject to those cases in which a female becomes impregnated after the ovum has passed into the cavity of the uterus, and in which the delivery of the two takes place at different periods and the fœtuses are both mature and perfectly formed, we proceed to consider the explanation of the mode in which this happens. Various opinions have been promulgated on this subject. First, it has been supposed that a second ovum impregnated has passed through the fallopian tube, to the cavity of the uterus, where, meeting the membrana decidua, it has pushed it away and attached itself to the uterus; the objections to this are, in the first place, the changes which the uterus undergoes in consequence of impregnation, the formation of a membrane which lines the cavity of the uterus, by which even if the ovum could become impregnated it could not get into the uterus, but secondly, the secretion of a mucus in the neck of the uterus by which the semen could not come in contact with the ovum, and consequently no impregnation be possible.

Dr. Dewees explains the occurrence of superfœtation on the existence of seminal absorbents arising from the vagina and conveying the semen to the ovum, where impregnation takes place. It cannot be required to produce arguments to refute a doctrine which is founded on a gratuitous assumption, such as the existence of seminal absorbents. No anatomist whose works I have ever seen speak of such vessels, and they probably owe their origin to the difficulty which attends every attempt at explaining the mysterious subject of conception. We shall now endeavour to show that this fact can be readily and satisfactorily explained by reference to the fact of the uterus being found divided into two compartments totally distinct from each other. That the uterus is thus found bilobate, or, as it is usually stiled, double, the following cases satisfactorily establish.

Dupuytren gives the following instance, "A woman, thirty-eight years of age, was brought to his theatre for dissection; a red substance was seen projecting from the vulva; when traced, it was found to extend throughout the whole length of the vagina: the os tincæ was divided by clefts, one perpendicular and one transverse. The finger when insinuated met with an obstacle in the median line of the uterus, on each side of which there was an opening. The neck of the uterus and the body were divided and separated from each other. The preparation was preserved in the anotomical museum of the Faculté de Paris.

The case related by Dr. **Tiedemann** is very interesting, and affords a practical caution to accouchers in forming opinions from manual examination. This female, during her labour was visited by two physicians, each of whom examined her; one declaring that she was not pregnant, that the os tincæ was firm and close; the other, that the os tincæ was open, and the head already engaged in it. This difference of opinion caused a discussion which led to an examination, when they found two vaginæ and a double uterus. Madame Boivin relates the following. In August, 1813, there was brought to her hospital a child, a few days old, who died shortly after of an imperforate anus. On examining the body, the uterus was found divided into two portions resembling lateral cones and opening into one vagina.

Haller mentions the following case. A young lady, aged about twenty-six years, after being a long time indisposed, died of hysteric convulsions. On examining the body he found a double uterus with two vaginas, each accompanied by a single tube and ovary of a natural shape. A remarkable case was related, by M. **Chaussier**, to the Faculté de Medecine of Paris. He exhibited the uterus of a woman who died at the Hospital de la Maternité, where she was delivered of her tenth child. The uterus consisted of but one-half, and that extending toward the right side: there was but a single fallopian tube and ovarium. Examples of double uteri might be multiplied to a great extent, but the foregoing are sufficient to establish the fact of their actual occurrence. Those who require further confirmation, may consult the works of **Haller**, **Eisenmann**, Memoires de l'academie des Sciences, Canestrini Historia de Utero duplici, Memoirs of the Royal Society of London, vol. iv. Dictionnaire des Sciences Medicales, &c. where they will find numerous cases of this kind, under the denomination of uteri double, bifed, bilobate, bicorn, bilocular, bipartite, &c. &c. Granting these facts, which cannot be denied, the whole difficulty of superfœtation disappears, each of these cavities may be considered as distinct uteri, and such in fact they are, not only in function, but, in some cases, actually separate and distinct throughout; it resolves itself into a parallel case to that of many animals where the uterus is separated into two cornua, and in which superfœtation is known to take place. The probability of this unusual structure of the uterus, in cases of superfœtation, is strengthened very much by the case of Madame Boivin. She states that after the birth of the first child, she passed her hand into the uterus to ascertain the cause of the tumour which was perceptible externally, and she found the cavity empty. This would be the case certainly if she examined the cavity from which the child was expelled.

The existence of two cavities in the uterus also explains the occasional occurrence of menstruation during pregnancy, a fact established by the testimony of DENMAN, BARD, HOSACK, &c. Having, therefore, established the fact of superfœtation and the difficulty of explaining it, and also the frequent occurrence of bilobate or double uteri, and the natural solution which it affords of all those difficulties, we may naturally conclude that where one exists the other will be found to exist also. I shall not at present consider the confirmation which this subject gives to the theory of analogues, promulgated by M. GEOFFROY ST. HILLAIRE, nor to the correspondence which these various degrees of anomaly in the structure of the uterus have with the structure observable in the various scale of inferior animals. This may be the subject of another paper.

ART. VII. *Remarks on the various modes usually adopted for the removal of the Tonsils.* By ALEXANDER E. HOSACK, M. D. of New York.

THE frequent occurrence of the disease requiring the operation of removing the tonsils, should be deemed a sufficient apology for calling the attention of the profession to a subject apparently so simple in itself, and which is rendered still more so from the various improvements suggested by the surgeons of this country, as well as by those of Europe.

Of late years the removal of the tonsils by the canula and silver wire, was considered the only safe and practicable mode of removing those glands. The mode of operating was by means of a double canula from three or four inches in length, armed with a silver wire, the latter to be placed round the tumour, and to be drawn with a degree of tightness requisite to strangle the part inclosed, and the wire to be tightened from time to time, until the part dropped off; which generally was accomplished within four or five days. To Dr. Physick the credit is due of shortening the suffering of the patient, by removing the wire after the first twenty-four hours, leaving the slough to separate by the process of nature; and by substituting an iron wire instead of silver, which is more readily disengaged from its attachments; but even with these improvements the patient suffered much, not only from the pain of the application, but from the inflammation and fever which is attendant upon this mode of operating. All other modifications of this plan, are very unimportant. Having had an opportunity, during my late residence in France, of frequently witnessing the successful removal of the tonsils by the knife, and having, since my return, performed that operation in six instances with the same favourable results, I avail myself of the opportunity afforded me through the medium of this journal to call the attention of the profession to the manner of conducting this operation, and the advantages it possesses over every other mode of removing the diseased tonsils—nothing more is necessary than to pass a hook through the body of the enlarged gland, and to raise it from its bed between the arches of the palate, then to pass a probe-pointed bistoury under its base, and with one stroke to sever it from its connexion: the hæmorrhage never exceeds two ounces, and is always to be arrested by a draught of cold water.

The following case is illustrative of the advantages which this mode has over all others before mentioned:—

A young lady, fourteen years old, suffered great inconvenience for a long time from an enlargement of both tonsils. In 1826, she was subjected to the mode recommended by Dr. Physick; as soon as the wire was applied, she was seized with convulsions,* which were only subdued by the removal of the wire: from this circumstance, the mother, who related to me this fact, had made up her mind never to have the operation attempted a second time. Dr. Brown, the attending physician, consulted me as to the practicability of removing the tonsil of the opposite side by means of the knife: to this there could be no objection; having assured her that it would be attended with a momentary pain, and that very inconsiderable compared with what she had experienced, she consented to the operation: it was performed in the short space of half a minute; the patient instantly declared that the pain bore no comparison to her sufferings caused by the first operation, nor afterwards did she experience the least inconvenience, even the next day she was enabled to walk out for pleasure. The objection usually advanced to this practice arises from an erroneous idea, as to the vascularity of the tonsil, and the hæmorrhage to be apprehended. Referring to the vessels of the throat and posterior nares, we find that the artery, which nourishes the tonsil is so indirect in its origin as to have the force of the circulation expended before it reaches its destination, being a branch of the third branch of the facial, which again is the third branch of the external carotid, making in all no less than six branches—under these circumstances hæmorrhage to any great extent is certainly not to be expected: the facts too on this subject are so numerous as to banish all apprehensions of danger from this source.

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* Such an accident never occurred to Dr. Physick, and in conversing with him on this subject, he informed us that the greatest fault which can be committed in the application of the ligature is, not drawing the wire sufficiently tight to destroy the vitality of the part as quickly as possible, when this is done, the severity of the pain generally subsides in the course of a few minutes, he however decidedly prefers excision.—I. H.

It may be remembered that this operation is not of modern date, but was performed by the ancient surgeons. To CELSUS the credit appears to be due as the projector, and the first to put in practice this mode of operating with the knife. Prior to and about the time of Celsus, it was the practice literally of gouging them out with the fingers and nails, and for this purpose the latter were permitted to grow to a convenient length. If at any time the resistance was found to exceed such means, they then felt themselves justified in removing the diseased parts by means of a bistoury and hook, such as was recommended by PAULUS ÆGINETA, the bistoury used for this purpose being concave on the side opposed to the tongue. Both of the last cited operations by the fingers and by the knife were objected to by FABRICIUS; he condemns the first as being quite as difficult as dangerous; the mode by excision he considers hazardous, from the hæmorrhage that is likely to ensue, but he has not noted any instance in which such hæmorrhage took place. It is at this time that we see the actual cautery recommended for the cure of this disease: however useful it may have been found in other complaints, it certainly was ill-judged in this, nevertheless it soon came into general use in most parts of Europe. Afterwards the feelings of humanity revolting at this application, the slow caustics were substituted, and finally the ligature took their place. They all received the sanction of WISEMAN and HEISTER; the former made use of the ligature at first, and the bistoury afterwards, supposing that he was enabled to close the larger vessels before removing them with a cutting instrument; if the tumour was pendulous, the knife was preferred; if its base happened to be broad, the patient was doomed to suffer the agonies induced by the application of the hot iron—those who made use of the potential cauteries were cautioned against allowing the potash to slip from the pincers into the œsophagus or trachea. The ligature was now in great vogue in Germany and Italy; Moscati, who had many opportunities of practising the various modes then in use, states that he was obliged to abandon the operation with the ligature, in consequence of the inflammation which always supervened, having, in many instances, threatened the lives of his patients. But adopting that of Celsus, he was almost as unfortunate from the circumstance of the patient being seized with a convulsive cough during the operation; consequently the tumour being half cut through, it rested upon the glottis, and nearly caused suffocation: as there is no direction given by him whether to commence the incision above or below, we must draw the inference that it was made from above downwards; he afterwards made use of scissors; not finding them as convenient as the bistoury he was obliged to return to it again—he never could have had fear of hæmorrhage, for he remarked that the vessels of the tonsils were very small. An improvement suggested by Desault, merits our notice—it is as follows:—a hook being passed through the gland to suspend it, then with two plates of silver soldered above and below, notched at one end, were applied in such a manner as to receive the tonsil, a blade is then pushed between the plates, which will separate the tumour in part—three efforts are usually made for this purpose. By referring to the works of that author it will be more readily comprehended, as it is illustrated by a plate. We also find that Desault recommends the use of the ligature should the patient refuse to submit to the excision, in that case he gave preference to the plan which he recommends for the removal of the polypus. Still he speaks of the dreadful consequences attendant on such practice. The plan of operating varies but little as it regards the instruments which are requisite in applying the ligature, they are all injurious and all answer the purpose to those who may prefer them.

On reviewing this short history of this operation, we find the plan first adopted by Celsus maintaining its importance, and sustained by the recent observations and experience of Dupuytren, Roux, Vacca, and their followers.

ART. VIII. *Case of* Mr. ADRIAN A. KISSAM, *Student of Medicine, who perished in a few days after receiving a slight wound in dissecting. Reported by* JOHN D. GODMAN, M. D. Professor of Anatomy and Physiology in Rutgers Medical College, N. Y.

ON Tuesday, the 27th of November, about eight o'clock in the evening, ADRIAN A. KISSAM made an incision about a third of an inch in length, across the fleshy part of the last joint of his left middle finger, which bled freely. He was engaged at the time in studying the relations of the abdominal viscera, and immediately previous to the reception of the cut, had been using his scalpel about the inferior surface of the liver, and the parts of the intestine which usually are discoloured by the fluids which in the dead body filter through the parietes of the gall-bladder. He complained of considerable smarting at the moment, and when my attention was first called to the wound, he was standing by the table squeezing the blood from the end of the finger. I requested him to wash his hands perfectly clean, with soap and warm water, of which there is always an abundant supply in the room, to suck the wound forcibly until he could no longer draw blood, and to close it up securely with court-plaster, adding that when this was done the danger would be over. Thinking that this direction would be at once followed, I went to other parts of the room and assisted the various classes in their studies. Some time after, returning to the table where Mr. Kissam was still employed, notwithstanding his wounded finger, examining and removing the abdominal viscera, I once more repeated to him the necessity of attending to the wound, and concluded by warning him to recollect, that if he neglected the advice it was "at the peril of his life." Unfortunately! he continued to pursue his dissection, and contented himself with merely washing his hands when he withdrew. Before he arose the next morning, he was seized with nausea and vomiting; he came to the college at ten o'clock, and while there became sick and vomited; his pulse was considerably excited, and his whole system appeared to be in a state of tumultuous uneasiness. Dr. MOTT saw him at this time, advised him to go home, and get his father, Dr. BENJAMIN KISSAM, to bleed him, and administer some cathartic medicine; he also directed him to apply a poultice to the finger, and to keep as quiet as possible. He went home and conformed to the direction in all points except in that of being bled. The medicine operated well, but he passed a wretched night. On the morning of the second day from the reception of the wound, (Thursday,) I was called to see him in consultation with Dr. Mott and Dr. Kissam, his father.

When I entered the room he was standing by the fire place with his left arm stripped, which Dr. Mott was examining, and never can the impression be effaced from my memory, which the expression of his countenance produced upon my mind. The left side of his face looked very much like the face of a paralytic, the muscles seeming relaxed and powerless, although there was no distortion towards the right side. An expression of intense anxiety was imparted to the countenance, and gave an air of wildness and alarm to all his movements. He complained of great pain in his head; the arm was not remarkably painful, the wounded finger slightly so, and the wound itself exhibited nothing of active inflammation; the pulse was not remarkably excited. The absorbents of the chest extending along the border of the pectoralis major were visible, being inflamed; none of the absorbents of the arm were similarly obvious.

A strong ley poultice was directed to be applied to the wounded finger, a large bread and milk poultice to the axilla, and ten or twelve leeches were applied to the head. The spirit vapour bath was also suggested with a view of determining to the extremities and surface, and if possible to produce perspiration; I have personally experienced under similar circumstances, the greatest relief from this treatment, and was inclined to hope its effect in this instance would be beneficial. Dr. Kissam applied this bath, (with Jenning's apparatus,) for upwards of half an hour, without any other effect than that of exciting a glow upon the extremities and surface of the body which had previously been cold.

When we visited him at half past four o'clock the pain in his head was greatly increased, his countenance indicated much congestion of the brain, he was drowsy, and spoke with hesitation, and the pulse was full and strong, though yielding when pressed. In consequence of these symptoms, we resolved to bleed him. Dr. Mott opened a vein in his right arm, and drew about eight ounces, which afforded immediate relief. All the symptoms of distress about the head ceased; the expression of countenance became natural, and he spoke freely, distinctly, and cheerfully. The nausea and disposition to vomit, which had existed from the first, now began to become more troublesome, and with a view to remove this distressing condition, a blister was directed to be applied over the epigastrium, after the skin had been reddened by the action of a mustard plaster. Blisters were also applied to the insides of his legs, and sinapisms to the soles of his feet. He remained tranquil at bed-time, and on the whole we were inclined to hope.

Friday—the blisters drew well, but made no change in the state of the stomach; during the night he had been somewhat delirious, but was now composed and steady—he said he had drank considerable quantities of fluid during the night; his stomach felt distended and uneasy. He then retched, and threw up a mouthful of yellowish coloured fluid. In a minute or two afterwards he called for the basin, which I held for him; he made an effort to vomit, and threw up a solid portion of fæces about the size of a small nutmeg, accompanied by a considerable quantity of fecal matter mixed with fluids which had been swallowed. His head pained him excessively. He had no sensation of burning about the stomach, and did not feel the least uneasiness on pressure of the abdomen. A dose of volatile alkali, 15 gtts. and Hoffman's anodyne liquor was administered, which he retained. He was ordered a similar dose every three hours. He fell asleep, and remained quiet for some time. At 10 A. M. the determination to the head recurred with great violence, cups were immediately applied to the temples, and subsequently a blister to the back of the neck. The cupping relieved his head considerably. He now, for the first time, complained of pain in his finger, which was very slightly swollen, I laid the finger freely open from its second joint to its extremity.

At this time he was visited by Dr. Hosack, who advised a repetition of the general bleeding, and he was accordingly bled from the arm until about six ounces were removed. The violence of his pain in the head and general uneasiness were abated, and he remained tranquil for some hours after. When we visited him again in the evening, his pulse was steady though compressible, the irritability of his stomach, and the disposition to vomit still continued when he swallowed any fluid in quantities larger than a spoonful at a time. At bed time there was some increase of the heat and uneasiness about the head, for which he was directed to be sponged, occasionally, with tepid vinegar and water; and as his stomach rejected every thing, unless in very small quantities, he was to take a table-spoonful of toast-water, of cold tea, or plain water, through the night.

About twelve o'clock of Friday night, Dr. Mott was called suddenly to visit him, and found him labouring under an increase of the vomiting, or rather the symptoms of ileus began again to show themselves. As the surface had been already extensively blistered and the depletion which had been employed had caused no change in his dreadful condition, Dr. Mott administered an injection of one hundred and twenty drops of denarcotized laudanum. This suspended the vomiting, produced a full anodyne effect, and in the course of a few hours was followed by a general and free perspiration. He slept during a considerable part of the forenoon and when awake was perfectly rational. He appeared so much better, altogether, as to inspire us with hope that the worst was over, and that his system would begin to recover from the dreadful shocks received.

Saturday.—As the drowsiness produced by the opium still continued, some alarm was expressed by members of the family, in consequence of which a simple clyster was administered which caused a moderate evacuation, and in the course of three or four hours several evacuations of dark though not very offensive matter. This indication of the cessation of the inverted peristaltic action, induced us to hope that the stomach would now retain some nutriment, which was directed to be prepared; but while it was getting ready, symptoms of great prostration began to appear. The pulse sunk, the dejections became frequent and involuntary, and a vomiting or rather belching forth of a dark green matter, convinced us that our hopes were entirely vain. In this condition we attempted to administer cordial and stimulant medicines, though conscious that little or nothing was to be expected from them, and the rapidity with which our patient sunk, soon caused us to desist from our unavailing efforts. He was perfectly rational and collected; insisted that his medical attendants should declare that they had no further hopes in saving his life, and after he had forced them to give their reluctant assent to his inquiries, he resigned himself with calmness to his fate.

Though his extremities were now cold, and the hand of death was evidently upon him, he called all the individuals of his family around his bed, and spoke to them in turn, and by name, bidding them a most affectionate farewell. He continued in a state of perfect calmness for several hours, during which time the ordinary means of sustaining and arousing the system were employed. Towards morning some slight degree of reaction occurred, and caused a faint hope that even yet his life might be saved—but this hope was fugitive. He continued to sink until the moment of his death, which happened on Sunday morning the 2d of December, 1827.

It is scarcely necessary to add, that his decease cast a deep gloom over his fellow students. His ingenuousness and excellence of character; his devoted application to his studies; and the ardour with which he sought to distinguish himself among his class-mates in every laudable enterprize, had acquired for him the respect and esteem of all who knew him.

[We are permitted by our friend and colleague, Dr. Godman, to express our suspicions, that the above case was one of acute and violent inflammation of the mucous membrane of the intestines, terminating in gangrene, and that the wound received in dissection was a mere coincidence, and did not produce the symptoms from which the patient suffered. As no post mortem examination was made, in consequence of the request of the patient, it is impossible to verify the correctness of this opinion; but it must be acknowledged, that the symptoms were very similar to those of inflammation of the mucous membrane of the intestines, and different from those usually produced by wounds received in dissection. I. H.]

Art. IX. *On the Safety and Advantages of Mercurial Inhalations.*

By Samuel Jackson, M. D. of Northumberland, Pa.

THE beginning of the nineteenth century is distinguished in the medical world, far above any former period, for the persevering industry of physicians in rescuing many from an untimely grave, who but a few years ago were *scientifically* given over to the ravages of disease, and the triumphs of death. The iliac artery, the carotid, the innominata, the aorta, have all been tied; diseased ovaries have been removed; the abdomen has been opened and the invaginated bowels rectified; the thigh has been successfully amputated at the hip; the parotid gland dissected out; and bronchotomy is no longer considered an affair of tremendous moment. If we should pretend to bring before the profession a simple process, by which more lives may be saved than by all these splendid operations combined, we may yet hope to escape the imputation of empirical vanity, as it will appear extremely facile, and within the capacity of every attentive physician.

A successful method of curing common diseases confers little splendour, but infinite usefulness; for more patients die of a simple pleurisy and its consequences than of the whole group of maladies requiring those fearful operations. To make ourselves acquainted, therefore, with ordinary diseases, and their methods of cure, is the primary duty of the practical physician; and hence it was that while the students in the University of Edinburgh were curiously gaping over the dissection of a bicephalous child, one of their number, who afterwards became a celebrated physician, was found busily employed in examining the patients in the fever ward. He said that he should probably spend all his life among febrile diseases, but that he might never see a double-headed child again. Impressed with these sentiments, we shall venture to lay before the profession a method of treatment which we have found successful in some dangerous and almost hopeless states of disease. We offer it, not as absolutely proven, but as in probation; and hope that it will claim the attention which the subject, independent of this paper most eminently merits.

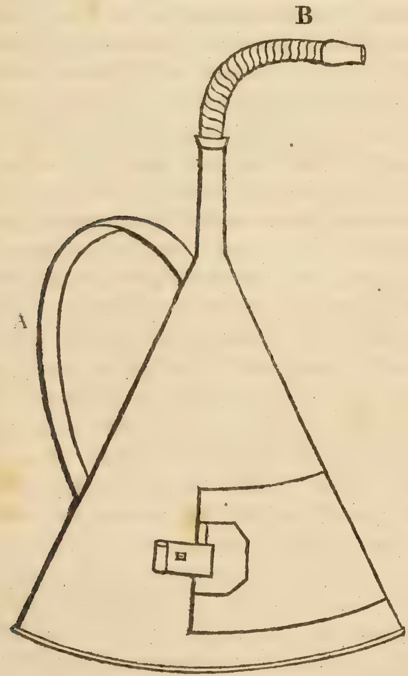
It is well known that in many diseases there often occurs a condition of the system, which would appear to render all remedies utterly nugatory, unless the patient can be speedily brought under the alterative or deobstructing powers of mercury. Such is the state of things in many of the congested and inflammatory cases of typhus, as also of the yellow and other bilious fevers. We often read of physicians labouring in vain to salivate a patient; the medicine is slower than the disease, or probably his susceptibilities are locked up by inflammation or congestion. In the local phlegmasiæ, also, a speedier method of affecting the system is required. A pleurisy, to which you are probably called too late, is not half subdued before the patient begins to succumb. You have done all that can be done by bleeding, blisters, and antimony; but the disease goes on, and there is no remedy unless mercury can be brought into action. But in all probability you have depended, and very plausibly too, on the use of common remedies till it is now too late to affect the system; or if you finally attempt it by frictions and calomel, the total operation of these passes off by the bowels, and your only hope is gone.

To insure a speedy effect in these deplorable cases, we have been for several years in the practice of using inhalations of the medicine, by which the system is soon possessed of the mercurial excitement and all its salutary effects, as it regards *these* states of the system, are very quickly attained. The preparation which we prefer is a modification of LALONETTE's; it is less offensive to the lungs than cinnabar, and as it is easily and quickly prepared of materials within every one's reach, it may be considered as always in readiness. But inasmuch as our paper may fall into hands which are not in possession of a method of preparing it, we shall give an improved recipe from *Abernethy's Surgical and Physiological Observations.* It has been copied into *Rees's Cyclop. art. Fumigat.* into *Cooper's Surgical Dict. art. Mercury*—and probably into other books which we have not read, or which do not come into mind.

> "Two drachms of aq. amm. are added to six ounces of distilled water, and four ounces of calomel are thrown into this liquor, and shaken with it; the powder is then separated by the filter and dried."

This is the preparation which was used by PEARSON and ABERNETHY, for the peculiar fumigations recommended by Lalonette; but to this we shall add for the convenience of those who may not have the aq. amm. at hand, that the sp. amm. either simple or aromatic, is equally suitable. Rain or river water may be used when the distilled is not to be procured, and the medicine can be prepared in a single hour.*

When we first used fumigations, we evaporated the powder from a fire-shovel or a smoothing iron, and directed the smoke to the patient's face by means of a common funnel. This method answered pretty well, but a large portion of the medicine passed off laterally, without coming into the sphere of his respiration. To remedy this inconvenience, we covered the patient's head with a sheet, elevated on the segments of large hoops, and then evaporated the mercury within this little sudatorium; as by this means he could not fail of inhaling the proper quantity. But this method was altogether inadmissible when it became necessary to avoid an exhausting perspiration, and therefore we devised a little instrument which directs the whole volume of vapour immediately on the patient's lungs.



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* We have not Pearson or Abernethy at hand, and it is many years since we read them. All the knowledge we possess of what they say on this subject, is derived from the above mentioned portions of Rees's Cyclopædia, and of Cooper's Surgical Dictionary.

The outline of this is a common tin funnel, about nine inches diameter at the base, with a flexible tube attached to the pipe. The base of the cone or funnel is closed with tin, and a door opens at the side large enough for the convenient introduction of a heated iron, weighing about two pounds. A little sheet-iron stand on the inside supports this iron, and thus prevents it from burning the bottom of the cone, or from rendering it too hot to rest occasionally on the bed. In the preceding figure, which will give an adequate idea of this little apparatus, A is a handle, which is very necessary as the cone becomes too hot to be held in the hand; B is a flexible tube of spiral wire covered with morocco, similar to that of MUDGE's inhaler.

SWEDIAUR, in speaking of fumigating external sores with cinnabar, directs an iron funnel formed of one piece without solder—a precaution wholly unnecessary, as no amalgamation can take place with either tin or solder in the present case.

To use the apparatus, let the iron be heated not quite to redness, and placed on the stand; about ten grains of the powder are then to be thrown upon it, and the door closed. The flexible tube directs the smoke to the patient's mouth, whether his head be covered, as above-mentioned, or not. When the evaporation ceases, another such portion is thrown on the iron, and from two to six such portions may be used in immediate succession. This process may be repeated every two, four, six, or eight hours, according to the exigencies of the case. When this method has been used for several days, the attendants have been salivated, and they must therefore be cautioned against respiring the fumes more than is unavoidable.

We should not think it necessary to observe, were it not in our own defence, that we ought to be more assiduous in watching the effects than when mercury is used in any other form. We have brought the system under the influence of it in twelve hours; and we presume, from our little experience, that it must be a very intractable state of the body which can hold out more than two or three days. In the use, however, of this hitherto dreaded mode of administering the remedy, we must regard the pulse and the general system; for if in these the happy effects of mercurialization are observed, we must proceed with the utmost caution; but as soon as the fetid breath is perceived, we ought to suspend the operation, as the present object is now attained, and if additional mercury be required, we can administer it in the ordinary way.

We are well aware that the intelligent reader already presumes to recognise in this method an exploded practice; but here we must implore his patience, while we set this matter in its proper light. Critics are sometimes too quick for their own understandings, and not unfrequently condemn before they comprehend. Let it be observed, therefore, that it was once the practice to expose the body and lungs of venereal patients to the fumes of mercury, in order to excite a salivation, instead of using the medicine by pills or inunction; but no where do we learn, as far as our limited reading extends, of snatching patients from the very grasp of death, by administering the fumigation in common diseases; for however well established may be the practice of salivating such patients, the present method of doing it seems to have escaped the diligence of medical investigation. The following quotation from *Bell on Lues Venerea,* will determine at once what the practice was, and also upon what principles it was abandoned; at the same time it will show how easily the system is affected, even when the vapour is not directed in a full stream on the lungs.

> "The fumes of mercury are applied to the body by burning different mercurial calces in the patient's chamber. By thus breathing, as it were, a mercurial atmosphere, and having the fumes equally applied to every part of the surface of the body, the usual effects of mercury upon the system are soon produced, more quickly, perhaps, than by any other method. Where it is meant to raise a salivation suddenly, or to throw mercury quickly into the system, this is perhaps the surest method of doing it; for with the fumes of mercury a salivation is sometimes excited in the course of a few hours. This brought the practice into much repute, when salivation alone was considered as the chief part of the cure; but now when it is known that lues venerea may be cured without much salivation; that the more gradually the mercury is thrown into the system, the more effectually it operates; and that very violent effects are sometimes produced by fumigating with mercury, the practice has of late been very generally laid aside."

The author then goes on to show the many advantages of directing the fumes upon syphilitic ulcers, and even acknowledges that he had "met with a few cases in which the mercury either went off too rapidly by stool when taken into the stomach, or where it was not absorbed, if applied in form of unction to the surface of the body, and in which it soon proved effectual when used in this manner."

More recently we hear nothing of the respiration of mercury, unless for the purpose of applying the medicine directly to ulcers in the fauces. Lalonette and Abernethy were no doubt impressed with some horrific phantom of danger, in contemplating the exploded practice, since they enclosed the naked patient in a tin box, with his head extruded, so that he might breathe the pure air, while the fumes were operating on the external body. They excited a salivation with great certainty, but many of the patients whom our method regards, cannot be removed from their beds to be thus incommodiously enclosed in a tin box.

The peculiarity, therefore, of the practice we are now recommending is reduced to these two points:—*First*, to direct the fumes to the lungs only, as this can be done without any disturbance to the debilitated patient; and *secondly*, to use them in all cases of common diseases for which a salivation may be indicated, and there is not time to effect it; or not sufficient excitability remaining to be acted upon by the medicine in common form.

With respect to the safety of this method, we presume there will be some question in the mind of every reader. Even the fumigation of the surface was denounced by CULLEN as a dangerous experiment, and it was, therefore, not without some trepidation that we ventured to apply it to a surface as extensive as the skin, and infinitely more susceptible of gaseous impregnations. It will no doubt be considered as rather an uncertain method, as the quantity the patient may respire, will be very different in different cases. But the same objection lies against its internal and cuticular use; for though we can in these applications limit the quantity, yet some stomachs and some skins are surprisingly sensible to the medicine, while others can hardly be affected, however zealous and intrepid our endeavours. It is true that we can form a pretty correct estimate of the mercurial excitability in many states of the system, but in many others we have much to learn; and since mercurialization is at all times a tentative process, the present method of tentation may possibly be rendered as safe as any of those in ordinary use.

The safety of the method, however, and its celerity also, are set forth, and in some measure confirmed, by an extract of a letter from Captain Sykes, published in the London Medical and Physical Journal, for March, 1827, and republished in the North American Medical and Surgical Journal, vol. iv. p. 172. A retort exploded in which mercury was distilling with lime, and the vapours salivated several persons in the course of twenty-four hours, a fact which the physicians of the army improved to their immediate use. The captain says—

> "Our medical men produce salivation in twenty-four hours, and I have heard of a recent instance of its being produced in seven hours, by fumigation. My shastree, a learned Brahmin, asserts, that the practice of exciting salivation, by means of inhaling mercurial vapour, has been used by the Hindoos from time immemorial. Bees-wax is melted, and spread over strips of thin cotton cloth; an equal quantity of cinnabar in powder is spread over the waxed strips, which are then rolled up in the shape of candles. The person to be salivated is seated

on the ground and a blanket is thrown over him; the lighted cinnabar candle is placed under the blanket, so that he inhales the vapour."

The captain expressed some doubts of this pretended antiquity of the practice, but the shastree pointed out a passage in an ancient Sanscrit work, in which the process was described. This may have been an Indian imposition, unless the captain understood the language. The letter, however, and particularly the fact of the physicians having adopted the practice, is a very striking instance in proof of the practicability of our method. We may expect to hear, in due time, all the particulars, and the general result of their experiments.

In offering this remedy to the consideration of the medical public, let it be remembered that we propose it in those cases only which are nearly desperate under all common methods of treatment; nor even in these should we use it, at least in the present state of our knowledge, unless in all probability there might not be time to mercurialize the system in any other way. We are not proposing any new indications, but merely a new method of fulfilling those which have long been considered as perfectly orthodox. The practice of salivating in fevers, is with us by no means a favourite: on the contrary, we consider it as a painful and justly odious remedy, which not unfrequently prolongs the patient's distress; but every one knows there are states of the system, in almost every species of fever, which to all human eyes, cannot be relieved in any other way, and in these nearly all learned physicians have agreed to use mercury, until some milder method be discovered. Such are many congested and inflammatory cases, in which the free use of venesection is often inadmissible. Dr. Armstrong relies greatly on the use of mercury in all these dangerous states of typhus; and we have long heard, and shall probably long continue to hear, of the imperious necessity of salivation, in very many cases of yellow fever. This disease, as it appeared in Philadelphia in 1820, was an intractable malady, and the physicians relied greatly on ptyalism, but they were often unable to attain it.*

In the puerperal fever, a most interesting and alarming disease, large doses of calomel have been given, as in yellow fever, for the two-fold purpose of exciting catharsis and salivation. Many cases of this disease run so rapidly through the stage of excitement, that every thing must be done within a few hours, or the patient is lost. Some of these as related by Denman and Armstrong, are highly congested states of fever that might possibly be prepared for the operation of mercurial fumes by the warm bath, frictions, and external stimuli;

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* Dr. Jackson's Essay, Philadelphia Journal, vol. 2, sub principio.

but, however this may be, we should propose this method as a last resort in all cases that have been too long neglected, maltreated, or that are sunk so low that venesection can be used no further, while unsuppurated inflammation is known to be in progress. From what we have seen of the puerperal fever we should consider the late practice of rubbing the abdomen with mercurial ointment as entirely futile. In fact, those cases that we have seen of the genuine disease would not tolerate such frictions, nor indeed any thing heavier than the anointing with a feather. We suspect this practice had its origin in the supposed analogy between the inflammation of puerperal fever and erysipelas; and we presume that time will find it as useless in the internal, as it is now demonstrated to be in *severe* cases of the external disease.

Upon the same principle that we should use it in puerperal fever, we should also recommend it in every species of internal inflammation, in which depletion could be carried no further, and there might not be time to introduce the medicine in the ordinary way.

In the pneumonia typhodes, which runs its fatal course in old weakly people and drunkards, with most appalling rapidity, we first conceived the idea of using these fumigations; but we have not tried them, as the disease disappeared from our circle of practice, when the bilious fevers invaded us, seven years ago. To these patients when broken down with old age or intemperance, venesection is certain death, so also is a profuse perspiration; and if the disease is not arrested before it inundates the bronchiæ—*væ medico*, the sick man, is forthwith suffocated. The very process of nature which cures the robust, is certain to destroy the debilitated.

Physicians have long placed their affections on mercury in hydrophobia, but complain that time is wanting to affect the system. We confess that to us a salivation has always appeared a very promising remedy, as the fatal symptoms would seem to depend on such internal inflammations and lesions as a strong mercurial excitement, is known to prevent, and often to remedy.

A disease almost as fatal as the hydrophobia, has lately become so frequent as to impress the most ardent and fearless votary of anatomical knowledge with terror and dismay. We presume the mercurial vapour will appear a promising remedy; and particularly if the malady should reach the fauces, as it once did in my own person, from having dissected a child who died of a very uncommon suppurative disease of this part.

In all venereal sores which are making rapid progress, and in which it is therefore desirable to arrest the disease without further loss of substance, the practice of fumigating them has been long established. By directing the fumes on a man's nose, in order to save it quickly from further erosion, we salivated him in three days, though his system had resisted every form of mercury which a skilful physician had been giving him for four months. But on this subject there can be no disputation; we only mention the fact in order to show with what great facility the medicine operates.

Case I. John Mullin of this town, after repeated attacks of remittent and intermittent fever, applied to me last January, in the following deplorable condition. From having been a very healthy, vigorous man, with a blooming complexion, he was now pale and cadaverous —the conjunctiva bluish and shining—the features pointed—tongue foul—pulse 120, quick, salient, full, and strong—hard, dry cough, with pain under the sternum, and great difficulty of respiration—a dull pain in the region of the liver affecting the point of the right shoulder—the spleen enlarged—the legs œdematous—urine common in quantity, but very red, and without sediment—frequent epistaxis, with blood highly inflammatory.

Bleeding and blisters with their various coadjuvants were liberally used for the first week without any evident amendment, and as he was now supposed to be in a state of preparation for mercury, the calomel was given combined with squills. But before this had time to affect the system, he unexpectedly sunk surprisingly, and was justly considered hopeless by all his friends. The cough was very severe and dry, his breathing difficult, his pulse small, weak, salient, 140 in the minute; his whole appearance was that of a lost man. He was supported by the steady use of nourishing diet, and moderate internal, with powerful external stimuli; in two days the fumigations took effect, his mouth became sore, and a striking amendment appeared in his whole constitution. The salivation was continued by using the blue pill, and though the disease developed itself in a universal dropsy, he was carried safely through all his maladies and restored to robust health.

In this case the patient was sinking rapidly under an inflammation of the lungs, liver, and probably of other internal parts, and no medicine with which we are acquainted, the mercury excepted, could have been of any avail, nor do we believe that any other method of using it would have been successful. If it be said that calomel might have been used sooner, we may reply, that the morbid action was so high as to resist its salutary operation. When at last it was determined that mercury was the only remedy, the patient fell unexpectedly into such a state of collapse that calomel could not have been given without the utmost danger of a fatal catharsis; nor in fact would there have been time to obtain the specific operation of this or of any other of the common preparations. The poor man was ready to sink under a severe inflammation with incipient effusion, and nothing but the prompt operation of mercury could have arrested this precipitous disease, and prepared the system for the recuperative powers of nature.

Case II. Thomas, son of James Glydewell, three miles north of Northumberland, was seized in the winter of 1823, with bilious or bilioso-nervous colic, which was then almost an epidemic in our neighbourhood. While he was taking calomel and opium for the two-fold purpose of procuring comfort and exciting salivation, a severe purging of bloody slime took place, and reduced him in one night almost to the point of death. We found him in the morning nearly without a pulse, with the catharsis still going on, while the system was not the least affected with the specific influence of mercury.

Opium was given freely, and many stimuli used with the utmost diligence, among which were tinct. of cloves—comp. tinct. of bark—frictions with external heat—soup, and arrow-root. The mercurial fumigations were used by my own hands, for I did not leave the house during eight hours, as the patient was a young man of no little importance to his poor and laborious parents. But he gradually sunk till at midday he was without a pulse at the wrist, and at four o'clock his legs were cold. We now left him perhaps two hours, while we went half a mile, to open the body of another patient recently dead of the same disease, and upon our return we found him still sinking and laboriously engaged in giving valedictory charges to each member of the family. This exertion we presumed would soon cut his last thread, and therefore we left him—but with strict injunctions that he should be faithfully stimulated and nourished till they might find him certainly dying.

The next morning we rose by daylight, in order to expedite business and save time for opening the body. Far different was his fate. An old neighbour came smiling to the door at this early hour with the welcome but mysterious news that Thomas was better. The fact was that the mother, between hope and despair, persevered with the stimuli, and in the course of the night the mercury took effect and saved his life.

We shall not add more cases, as we have never taken daily notes of diseases, unless in a very few instances; having depended more upon the recording of general results and the establishment of general principles. We have used the remedy in twelve cases with all the advantages that we could wish to derive from it, nor did we excite an excessive ptyalism in one single instance. It failed only in the case of a maniac, but here we believe it was not fairly tried. We have often lamented our omission of this medicine and our dependance upon gentler measures, but never have regretted the use of it in a single case.

We must here caution the reader against imputing to us the empirical folly of bringing forward a remedy which is to be infallible in the case of every dying patient: like all things human, it will often fail, even when tried under promising circumstances. All that we pretend is this, that it will sometimes succeed in affecting the system with mercury when other means would fail; and that, consequently, it renders one important indication in medicine, infinitely more facile and certain than it has hitherto been. Nor let any one suppose that we presume to have established this method as infallibly useful and imitable. Many unobserved and even inscrutable circumstances may have concurred in promoting the favourable operation of the mercury in our various cases, as a fortunate coadjuvancy of things unseen may for a time give a medicine some factitious reputation, which a multiplied experience will generally diminish or entirely nullify—a mortifying fact that has long been known in our tentative science.

Against the use of ptyalism in fevers much clamour has been raised, and, as stated above, we confess ourselves most vehemently hostile to the practice, whenever gentler measures will ensure our safety; but we cannot join in that indiscriminate reprobation of the practice in which some physicians find too much delight, and thus inculpate their own understandings as well as degrade and bring into suspicion the whole science of medicine. Dr. Hosack, in one of his reports to the governors of the New York Hospital, does fairly represent that mercury is a dangerous and highly mischievous remedy. When speaking of his typhous patients, he says, "they recover without that injury to the constitution, and that liability to rheumatism and other inflammatory diseases, that we frequently observe in those who have undergone the operations of mercury."*

We shall bow with becoming submission to such high authority, but at the same time shall observe that every careful practitioner must have startled at this passage, and have begun to look around among his patients with no little anxiety, to ascertain whose constitution he had *injured*, and whom he had endowed with a *liability to rheumatism and other inflammatory diseases.* There is already too much prejudice in the world against this medicine, and physicians would confer respect on the profession by endeavouring to diminish it; while by thus holding it up to the blind inquisition of the reading community, they will weaken public confidence, and greatly derogate from the honour and utility of the healing art. The public ought to be apprised that almost any medicine is variously dangerous in the hands of ignorant temerity; but that learning and honour may be confidently trusted with the most powerful agents in the materia medica. As far as regards our own observations, whether confined to one particular practice or extended occasionally into that of other physicians, we have never seen any of these evils result from mercury. But at the same time we have fortunately had it in our power, through the long-continued use of the suspicious mineral, to relieve patients of *chronic rheumatism* or something similar though perhaps worse—the unhappy result of the non-mercurial practice in syphilis. So pitiable has been the condition of some wretched beings who have come from seaports, and from under the care of the anti-mercurial doctors, that we can no longer read of their opiate, and acid, and golden recipes, without some feelings of reprobation and contempt.*

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* Appendix to Thomas's Practice and Eclect. Rep. x. 274.

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* [We believe our coadjutor has viewed the cases to which he alludes, through the medium of strong prejudices. For our own part, at least, we lament that the non-mercurial practice in venereal disease is not more generally adopted. We certainly have not met with any case, properly treated upon that plan, in which we have had reason to believe that the patient suffered from mercury having been withheld, and we certainly have met with not a few in which it has been unavailing, and many in which the most distressing consequences have followed its exhibition.

"Mr. Rose has published in the Medico-Chirurgical Transactions, an account of 120 cases cured without mercury in his military practice during a year and three quarters. Mr. Guthrie successfully treated 100 cases in the same manner, and has seen notes of 400 more cured without mercury in the different hospitals. Dr. John Thomson relates 155 cases similarly cured by him in the Consolidated Depot Hospital at Edinburgh Castle. Mr. Hennen has published 105 equally successful cases, 20 of which were cases of true Hunterian chancre. And in a general investigation, undertaken by the surgeons of the British army, it appeared that, out of 4767 cases, 1940 were cured without mercury. Of these, 96 had secondary symptoms, but every man was fit for military duty immediately on his dismissal from the hospital. The average period for the

Ptyalism, as we have stated above, is a foul, painful, odious remedy, and never to be used when the safety of the patient is not at stake, or when gentler means will almost certainly succeed; but a little present distress is never to be weighed in the balance against certain danger, or even against lasting pain. The highest authorities in medicine have clearly shown, that, in every species of fever many patients are saved by mercury, who would be otherwise certainly lost; and this fact alone is a sufficient argument for our present purpose, since, as we have already said, we are not inventing a new indication in medicine, but a new and more successful method of fulfilling an old one. Whoever believes himself ready to perish, will gladly lay hold of this means of safety, however uncomfortable; let us then do unto others, as we would they should do unto us, and fly to mercury as the last hope. It will not only avert impending danger, but in many cases it will remove old obstructions, break up morbid associations, create new capacities of life, and almost regenerate the whole man: it is, with the solitary exception of cinchona, the greatest medical blessing which a benevolent Providence has conferred on his suffering creatures.

cure of primary symptoms was 21 days, and of secondary 36 days. The remaining 2827 were treated with mercury: 51 of these had secondary symptoms, and two men were rendered unfit for the service. The average period for the cure of primary symptoms was 33 days, and of secondary 45. The foregoing cases, it is stated, include not only the more simple sores, but also a regular proportion of those with the most marked character of syphilitic chancre. On a survey of the results it appears, that under the non-mercurial treatment, the disease more frequently advanced to the secondary symptoms—but that, on the whole, the average time of cure, both of primary and secondary symptoms, was less than it was in the cases where mercury was employed."—*Bigelow's Sequel.*

For further proofs of the efficacy and safety of the non-mercurial, or physiological practice, in syphilis, we refer to the valuable paper of Dr. Harris, in the North American Medical and Surgical Journal, vol. i. p. 38—to the work of Devergie, for a notice of which see our last number—to the elaborate treatise of De Brus, a review of which will be found in our present number—and the article Mercury in Chapman's Elements of Therapeutics. I. H.]

ART. X. *Case of Gun-shot Wound of the Leg, in which five-sixths of the structure at the seat of injury was destroyed, successfully treated, the limb being preserved.* Reported by JAMES A. WASHINGTON, M. D. House-Surgeon of the Pennsylvania Hospital.

CHARLES ULARY, aged eleven years, was admitted, under Dr. J. R. BARTON, into the Pennsylvania Hospital, on September 1st, 1827, with a recent gun-shot wound of the leg. A fowling-piece, which he had handed across a ditch to its owner, having been accidentally discharged, as soon as received, with its muzzle within two feet of him, its contents had passed entirely through his left leg, just above the ankle joint, the joint happily escaping uninjured. He was brought into the institution, before any application had been made to the part, but not until a few hours had elapsed after the accident, as he resided at the distance of four miles from the city. The wound presented the appearance of a large, ragged perforation, passing through the limb horizontally, and from side to side. The orifice on the inner side of the leg, was at least three inches in its vertical, and two inches in its horizontal diameter; but the size of the outer orifice was rather less: their margins were irregularly lacerated, as was the whole surface of the wound. The contents of the gun having passed through the limb, from so short a distance, a very considerable destruction of the part had taken place, and it was estimated that five-sixths of its structure, at least, had thereby been carried away.

The parts removed consisted principally of more than an inch of the tibia and fibula, their fractured ends, above and below, being that far removed from each other; also of the corresponding portions of the tibialis posticus and the long flexor muscles of the great toe and the small toes, as well as of the fatty matter interposed between them and the tendo Achillis. The skin covering the limb at the seat of injury, had, of course, been in a great measure destroyed. The parts that were left in front of the wound, consisted of a sound strip of skin about two inches in breadth, and of the muscles which it covered, the peroneous tertius, tibialis anticus, and the long extensors of the great toe and the small toes, which had not been materially injured; behind there remained the tendo Achillis, with another sound strip of skin, but barely sufficient to cover it. The long and the short peroneal muscles, situated on the side of the leg, and whose tendons pass together, behind the malleolus externus, had also escaped without being seriously injured, and were seen crossing about the middle of the external orifice of the wound, the silvery hue of the tendons being still preserved. But what was the most important of all is, that the anterior tibial artery was found uninjured, in consequence of that portion of the periosteum covering the anterior part of the tibia being left, though but barely, and with a film of bone attached to it, here and there.

A consultation having been held between the attending surgeons of the hospital, Drs. BARTON, HEWSON, and PARRISH, they determined, in consequence of the youth of the boy, and of the circulation being still carried on by the anterior tibial artery, as was manifested by its pulsation and the warmth of the foot, to attempt to save the limb. Although from the lacerated character of the wound, the hæmorrhage was rendered much the less profuse, particularly from the large vessels, yet from the extensive surface that had been exposed, sufficient bleeding had taken place to produce a very decided effect upon the system. When the boy was admitted his countenace was extremely pale, but reaction had, in a measure, ensued, and his pulse possessed tolerable force, though very quick in its beat.

The immediate application to the wounded surface, which was suggested by Dr. Barton, and had never before been used, as far as we know, consisted of wheat bran. His limb was placed upon a soft bed of cotton previously spread over with bran, after being protected by oilcloth, in a kind of box, open at one end and above, and with side lids attached to it by hinges, and used for fractured legs in the hospital. The foot which had before laid upon its outer side, from the very considerable destruction of the continuity of the wounded part, being properly adjusted, the cavity of the wound was filled with the bran, and the limb for a distance above the wound, as well as most of the foot below it, enveloped in the same article. When the character of bran is considered, it will be understood how very well adapted it is to the dressing of a wound of this nature. It serves to absorb the discharge, and is thereby, in part, converted into a very good poultice, while by the compression thus induced upon the wounded surface, it will prevent any inordinate hæmorrhage, at least in a case so favourable to its application as the present. For the first five days the bran was only partially removed, and more fresh bran applied—so that the great pain that would have been produced by daily moving the limb to dress it, was obviated.

On the sixth day, the boy being lifted towards the foot of the bed, in order that the box might project beyond it, and over a tub placed beneath, the wound was entirely cleansed, by means of a syringe, with warm water, the bran being easily washed away. On this day, the first after the accident that the wound had been fully exposed to view, its surface, which had been killed by the severity of the injury, presented a darkish aspect, owing to the sloughs not yet having separated. Considerable swelling had taken place at the part, in consequence of the inflammation which had supervened. The discharge which had as yet been seen, appeared principally to consist of a thin serous exudation of a reddish hue: only a slight trace of pus, having up to this time been observed.

By the eighth day, the upper portion of the wound, or that nearest to the knee-joint, had cast off its sloughs, and the exposed granulations presented a very healthy appearance, while the sloughing from the lower portion, or that nearest the foot, had not taken place: this difference being obviously attributable to the diminished circulation in the lower part of the wound.

On the fourteenth day the wound exhibited a healthy appearance, but the granulations were less florid than previously. On the twenty-fifth day the cavity of the wound was observed to be considerably diminished by the luxuriance of the granulations, and the contraction that had taken place in the limb: the loss of bony structure, allowing it to be thus diminished in length. On the twenty-eigth day, the cavity was still more reduced in size, and the fragments of the tibia had come into contact, from the contraction of the limb above noticed: the upper fragment was spear-pointed, and consisted of compact structure, while the lower fragment presented several points or a very uneven surface, and consisted of the cellular structure, of which the extremities of the long bones are formed. In comparing the legs together, it was found that the injured limb had been shortened rather more than in inch. The upper and lower fragments of the fibula, were also found in contact, but rather less of this bone being removed than of the tibia, it will be perceived that a slight curvature must have taken place at the seat of injury, in order that the fragments of the bones might thus meet. This bend of the limb inwards, was however but slight. In consequence of this disposition of the parts, the upper fragment of the fibula projected too much outwards, and from its outer surface being denuded of periosteum, its white appearance rendered it very conspicuous. Although the fragments had now come into contact and jutted against each other, still the foot required support, to prevent its falling to one side.

On the 9th of October, five weeks and a half after the accident, the process of exfoliation was, for the first time, observed to have been completed in a part of the exposed surfaces of bone. It has been mentioned that the lower fragment of the tibia consisted of spongy structure, and in a portion of its exposed surface, though the supply of blood to it, was, of course, from its situation and the nature of the accident, much less abundant than to the more compact structure of the upper fragment, yet exfoliation here first occurred: a circumstance ascribable to the greater vascularity of the spongy structure of the bone.

From this time to the present date, the process of exfoliation has gone on, and is now very nearly completed: bits of bone thus cast off, or loosened from the living structure, have from time to time been removed. The depth to which the surfaces have exfoliated has in no part been great. The formation of osseous matter has also taken place so as to unite the fragments above and below, and for so long a time, and to such a degree, that for a month past no motion at the wound could be perceived.

It was mentioned in the previous part of this paper that a portion of the anterior periosteal covering of the tibia, with small scales of bone attached here and there had been saved. This remnant of periosteum has been a prolific source of the osseous secretion. There is correspondent to this portion, a protuberance consisting, principally, as indicated by its hardness, of osseous matter, while the parts of the tibia above and below appear to be very nearly in their natural relation to each other as regards direction. The cavity of the wound has for several weeks been filled up, with the exception of a sinus, in which a small probe may be introduced, that is left for the exit of the bits of bone which are from time to time cast off by exfoliation. As this process seems to be almost entirely completed, it is presumed that this sinus will shortly close. The foot and whole limb is somewhat swelled, and by measurement the circumference at the wound is twice that of the correspondent portion of the other limb. This difference will be in a great measure diminished after the cure is completed, and he shall have regained full health.

The injured limb is shortened nearly one inch and a half. The curvature of the limb inwards is only slight, but to overcome this tendency as far as was practicable, an outward splint and a roller were, during the progress of the case, used for a time, but are now laid aside. The application of bran is still used alone, with the exception of a roller gently applied over the whole limb, from the toes to the groin, intended to counteract the disposition to œdema, that has been particularly observed since the discontinuance of the pressure used during the application of the outward splint.

Having thus presented, for the sake of perspicuity, a connected view of the leading features of the case, as regards the wound itself, it will finally be proper to notice the sympathetic disturbances of the system, induced by so extensive an injury, and to give a general view of the treatment pursued in consequence of such disturbances. As in this case tetanus was particularly apprehended, in the commencement, it was deemed proper to guard against it by the repeated exhibition of opium, so as to keep the system in a measure under its influence; and after all danger of tetanus had passed over, it was still exhibited for some time in sufficient quantities to mitigate the irritation which the wound was calculated to produce in the body generally, and more particularly to enable him to rest well at night. During the first three days a symptom occurred of rather an alarming nature, as it was uncertain whether it might not be the forerunner of confirmed tetanus, but it may be doubted whether it should not rather be attributed to the prostration consequent upon the hæmorrhage from the wound, than to the irritation upon the nerves at the seat of injury. During the time specified, the flesh or tendons at the wrist were observed to be affected with subsultus, but fortunately on the fourth day this symptom disappeared, and was not noticed afterwards.

The sympathetic fever that occurred after the accident, was at no time of a very intense character, and hardly demanded any thing more than an attention to the state of the stomach and bowels. After copious suppuration had taken place, it considerably abated, and by the thirteenth day it had decidedly subsided, though some irritation still existed, and which has more or less continued, until the present time, as has been all along manifested by the too great frequency of the pulse.

The sympathies of no part of the system, with the wound have been greater than those of the digestive organs, particularly of the stomach. During the first two days, it ejected almost every thing that was taken into it; afterwards it became more settled, but still, for a considerable time, it would occasionally eject its contents. The appetite, though it remained feeble for a long time, yet after the suppurative process took place, it more manifestly improved, and had become tolerably vigorous, when it became almost entirely subverted during the continuance of a diarrhœa that supervened and which will be presently noticed. During the first six weeks, the bowels were obstinately costive and were hardly ever moved, except in consequence of the administration of an injection, or of some laxative medicine. This torpid condition of the bowels, no doubt extended also to the other abdominal viscera, as the liver and pancreas. In the interval above mentioned, colicky pains in the abdomen, of a very severe nature, accompanied by a tympanitic condition of the bowels as well as costiveness, were upon two different occasions, the seventeenth and twenty-first days after admission, experienced, but subsided shortly after free evacuations had been obtained by injections, and the administration of anodynes. About the first part of the sixth week, the diarrhœa alluded to previously, occurred, and it continued, more or less, for upwards of two weeks, or until the latter end of October. It had a very decided effect over his general health. The powers of the stomach became greatly enfeebled, nutrition much impaired, and very great emaciation induced; in fine, our patient was brought almost to the very verge of the grave. From the character of the discharges, it was very apparent, that the irritation affected not only the bowels, but also the liver. The means used for counteracting the diarrhœa, consisted principally of castor oil, alone or with laudanum, given internally, of antacid astringents with laudanum, and of demulcent anodyne injections. Since the first of November, his bowels have continued, generally, in pretty good order, and his digestion has gone on as well as could have been expected. His limbs are still small, though not near so much emaciated as they were, in consequence of the diarrhœa. His general strength is increasing, and for a month past he has been able to sit up, and to be moved about the ward, in a chair with wheels attached to it: the weather not permitting him to be taken into the open air, as it has been very disagreeable for several weeks past.

Hospital, 31*st December*, 1827.

Art. XI. *Observations on the inefficiency of the cathartic powers of Rhubarbarine, with some Remarks on the different varieties of Rhubarb.* By George W. Carpenter, of Philadelphia.

THERE is perhaps no maxim more generally admitted, than that "there is no rule without an exception." Among the discoveries and researches in the various departments of arts, science, and manufactures, there is occasionally found one which, (either from being overrated by too hasty an observation, or defective from difficulties in the manufacture or construction,) fails to support the characters assigned to it by its discoverer, or by those who may have described it. When an instance of this description is discovered, any one having full evidence of the fact, should consider it his duty to point out the error.

Vegetable chemistry has added to our materia medica a catalogue of highly useful and important remedies, among which stand conspicuous, quinine, cinchonine, morphine, strychnine, cornine,* piperine, &c. all of which have continued after a full and extensive trial to support the characters originally assigned them, with the exception of *one*, which is the subject of the present communication.

Disagreeable as it is for me to criticise the writings and discoveries of men, eminent in the profession, yet for the promotion of science, and the propagation of truth, I shall not hesitate to do so, and feel confident that in this I shall meet with their approbation, inasmuch as the error was altogether inadvertent, and their object exclusively, to give the article its true and real characters.

A chemical principle discovered by M. PFAFF, and also prepared by M. NANI, a distinguished chemist of Milan, has been obtained from the rheum palmatum. M. Nani denominated this principle sulphate of rhubarb, which name it still retains. M. Nani reports the article to be cathartic in doses of a few grains, and to possess many advantages over the rhubarb, from the circumstance of its possessing an uniform activity, while the different kinds of rhubarb have qualities so various, that in many cases the ordinary doses are very uncertain, &c. &c.†

From the high commendation of this medicine, I was induced, at the instance of several of the faculty of this city, to prepare some of the article, as there had not yet been any received in this country. I accordingly adopted a process founded on that of Nani, but with some modifications, and published my formula with observations in the Philadelphia Journal of the Medical and Physical Sciences, and in Silliman's Journal—from which it was translated and inserted into the Bulletin des Sciences Medicales, for April, 1826, with some editorial remarks. Although I feel bound to acknowledge that I was the first to introduce this article in Philadelphia, and have sent a considerable portion to physicians in different parts of the United States, I must say, in justice to myself, that my province was exclusively confined to the preparation of the article—its modus operandi was submitted to the judgment and experience of those who were engaged in the practice of medicine. My paper went to press early after I had prepared the article, and before I could collect sufficient facts to justify any conclusions as to its effects in the hands of those who had first employed it in this city; my observations, therefore, in relation to its virtues were upon the authority of M. Nani, and although modified a little, and commending less its cathartic energy, were, nevertheless, greater than it merited, and further experiments have warranted.

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* It is much to be regretted that the cornus florida should yield the cornine in so minute a proportion as to prevent the discoverer from supplying the demand. This medicine has uniformly supported the character and description given by my friend, Dr. S. G. Morton, and the author can produce testimonials of the highest authority from different parts of the United States corroborating this statement, and furnishing additional proofs of the efficacy of the cornine in the treatment of intermittents.

† See Bib. Univer. July, 1823, also Silliman's Journal, vol. 7, page 385.

The physicians who first employed this medicine were so disappointed with its activity, that I was apprehensive of having failed in some part of the process for its manufacture. I therefore prepared it with great care several successive times, both according to the formula of Nani and my modified process, but with the same result; in order to prove positively there was no defect in the manufacture, I sent to Paris and procured it of the manufacture of Pelletier, which was found to be equally feeble, if not more so, than that which I prepared—proving beyond question that the powers of the rhubarbarine had been much overrated. That manufactured by Pelletier required a larger dose than the extract of rhubarb prepared according to my formula in the Philadelphia Journal of the Medical and Physical Sciences. I have taken several times twenty grains and upwards without its producing a cathartic effect.

The rhubarbarine resembles more an extract than any of the vegetable principles. It is solid, dark brown, opaque, possessing the odour of rhubarb, and a taste slightly nauseous and bitter, it is deliquescent, and very soluble in water, alcohol, and æther. I cannot consider this to be the active principle of rhubarb, as a considerable portion of cathartic matter is retained by solution in the water, from which the rhubarbarine is precipitated. The term sulphate of rhubarb is an extremely improper application, as there is no sulphuric acid in its composition. The sulphuric acid first employed in the acidulated decoction is entirely decomposed by lime with which the rhubarbarine is precipitated perfectly uncombined with acid, it is then taken up by alcohol, separating it from the sulphate of lime. The alcohol containing the rhubarbarine is then evaporated until the latter is obtained in the form above described. It is evident therefore, that from this process there can be no sulphuric acid in its composition, and that the term sulphate of rhubarb is not applicable. I several times used the term in my former paper, as it was originally bestowed up it, and its use was sanctioned by custom and authority.

The process for manufacturing the rhubarbarine is expensive, and the product small, which renders it as costly as the sulphate of quinine, it is therefore particularly important that its true properties should be made known.

The rhubarb of commerce differs materially in activity, and great deception is practised in selecting and artificially preparing the roots, so that the same species will frequently be sold for East India, Russia, or Turkey, and command corresponding prices.

Four varieties of rhubarb are indigenous and cultivated in France, viz. the rheum palmatum, compactum, undulatum, and rhaponticum. The superiority, however, of the palmatum, has caused the cultivation of the others to be neglected or abandoned. The difference between the activity of the French and English rhubarb, and that of China and Turkey, is caused by the age of the root; the former after three years growth decaying in the ground, while the latter are not taken up until the seventh or eighth year of their growth. The China and Turkey rhubarb grows without culture in almost any situation; the French and English requires a moist soil and a particular degree of exposure, and also considerable attention in cultivation. The former possesses a colour more fixed, a stronger odour, and a taste quite aromatic and slightly bitter—the latter, a taste more mucilaginous and herbaceous, and evidently a less degree of strength. From chemical analysis, first made by Mr. HENRY, and afterwards by the celebrated M. CAVENTON,* we find that one hundred parts of China rhubarb contain seventy-four parts soluble in alcohol and water; a like quantity of the cultivated rheum palmatum furnished but sixty-four, the compactum but fifty, the undulatum but thirty-two, and the rhaponticum but thirty. Thus the rheum palmatum is proved to be the most active of the indigenous species, but is inferior to the China. It is proved that the strength of the indigenous rhubarb increases with its age, but as it cannot, from circumstances already quoted, attain the age of the exotic, it never can equal it in strength. Numerous experiments made by Dr. GEOFFROY, M. ITARD, and M. RIBES, in several public institutions of France, prove that the indigenous rhubarb is purgative, and may be substituted for the exotic, in pharmaceutical preparations, by employing one-fourth more than the latter.

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* Bulletin des Sciences Medicales, Avril, 1826.

Art. XII. *Cases showing the Efficacy of the Volatile Alkali in the Bites of Venomous Snakes.* By I. Moore, M. D. of Scrogy, Miss.

More than twenty years ago, I came to the knowledge of this remedy, and residing in a country abounding with venomous serpents, I was soon afforded an opportunity of testing its virtue.

The first case which occurred was in the month of July, 1807, in a very large, strong, healthy negro man, aged about twenty-five years. A very large rattlesnake had struck him twice on the top of his foot. I arrived one hour and a half after the bite; I found the patient lying in his master's gallery, with the dead snake at his feet, so that there could be no doubt of the species of serpent which had inflicted the wounds. He complained of violent pain in the foot and ankle, and the swelling had by this time advanced as far as the small of his leg, which he had encircled with a very tight bandage. I ordered the bandage to be removed immediately, and permitted the swelling to progress, which it did with great rapidity. I ordered the wounds, (which had bled freely,) to be well washed with warm water, and applied a pledgit to them wet with the volatile spirit, and at the same time gave him a tea-spoonful in a wine-glass of cold water internally. The pain continued without any abatement, and the swelling advanced rapidly up the limb for an hour; at the end of which period, I repeated the same dose, and made a fresh application to the wounds. In half an hour he declared the pain had entirely abated, and the swelling, which by this time had progressed above the knee, was arrested and went no further—in a few minutes the patient fell asleep. I then left him with directions if the symptoms recurred to call me again—if not, to apply a bread and milk poultice to the wounds at bed time. I found him next day free from pain, and the swelling almost entirely subsided. The wounds suppurating, I directed them to be dressed with basilicon, and in three days he returned to his usual labour.

The next case which I shall select, was of an African negro man, of low stature and strong constitution, about thirty years of age. He was bitten on Sunday morning about ten o'clock on the wrist by a mockasin, which from my experience, I pronounce much more venomous than the rattlesnake.

A variety of remedies were resorted to, for in this country almost every old woman has her weed for the cure of snake-bites; and this poor fellow had been well plied with green plantain juice, sweet milk, sweet oil, gall of the earth, poplar root tea, &c. &c. I was called in on Monday morning early, about twenty hours after the injury. The wound presented a raw surface as large as a dollar, and was discharging a thin yellow sanies almost in a stream.

The limb was swelled to the utmost possible stretch, was livid, and so painful as to produce a loud shriek from the sufferer whenever it was moved. The pectoral muscles were also swelled, and sore to the touch, the face was tumid and shining, the tongue enlarged, and deglutition difficult. He was occasionally faint; the pulse obscure and intermittent, with constant nausea, and occasional vomiting. His arm was enveloped in a poultice of roasted onions from the wrist to the shoulder.

I ordered this poultice to be removed, and the arm well washed with warm water, and applied a pledgit to the wound wet with the spirit, and at the same time exhibited a tea-spoonful by the mouth in a wine-glass of cold water. I waited impatiently half an hour, and perceiving no abatement of the violence of the symptoms, I repeated the dose and renewed the application to the wound. I now watched him an hour by my watch, when he acknowledged he felt a little *easier.* I then repeated the dose, and renewed the application to the wound, and in less than half an hour I had the satisfaction to hear him declare he was free from pain—from this time he only complained of the stiffness, soreness, and weight of his limb. The constitutional symptoms did not again recur, the swelling of the muscles gradually subsided, and I saw him again in the course of three or four days, with nothing remaining but a small ulcer, which was soon healed by the ordinary applications.

The third and last case which I shall describe, was a negro boy, one of my own slaves, eleven years old, strong and healthy. He was bitten on the top of the foot by a small mockasin which was concealed in a bunch of briars. I saw the snake bite him—he drew up his foot, and said a briar had scratched him. I ordered him to the house without apprising him of what had happened—my reasons for concealing from him what had really happened, was that it would afford me an opportunity of judging whether the excessive perturbation generally evinced by persons bit by snakes has any share in aggravating the symptoms.

On reaching the house and examining the foot, I found two little scratches, with a single small drop of blood dried on each. He now, (about fifteen minutes after the bite,) was crying with the pain in his foot, which had begun to swell. I washed the wounds, applied the remedy externally, and gave half a large tea-spoonful internally. The swelling progressed rapidly up the limb, and the pain became more violent. In half an hour I repeated the dose, and renewed the application, and after watching him for another hour, I had the mortification to find all the symptoms aggravated. I now gave him internally a tea-spoonful of the spirit as before, and waited another hour without perceiving any good effect. By this time the swelling had progressed almost to his body, and the pain was excruciating along the whole limb. I now repeated the dose, still confident in the remedy, but after waiting another hour, the limb was swelled to the utmost possible extent; the abdominal muscles became enlarged and very sore; he complained of a sense of stricture across his breast; his extremities became cold; his pulse imperceptible at the wrist; the whole body covered with a cold clammy sweat, and his respiration quick and laboured.

It was at this stage of the case that I suspected the quality of the medicine. I despatched a messenger instantly to my friend, Dr. LEYBOURNE, who sent me a bottle of the spirit which had never been opened. I gave the little sufferer a large tea-spoonful, and repeated it in half an hour. It was with great difficulty he swallowed the second dose, but I had the gratification, in thirty minutes afterwards, of witnessing an astonishing alleviation of the patient's sufferings, the pain gradually subsided, his breathing became natural, the circulation was restored, his body and limbs became warm, and in a few minutes he fell into a sound sleep: he awoke entirely free from pain, the swelling gradually subsided, and in a few days a small sore at the seat of the bite only remained.

Fourteen other cases of the bites of rattlesnakes and mockasins, in which the character of the serpent was positively known, have been treated under my own eye within the last twenty years, in all of which the symptoms, mode of treatment, and results have been so similar, that a recital of them would only be a repetition of what I have already written.

As every thing depends on the quality of the medicine used, I will only add, that which I have used for fifteen years, I have obtained of Mr. CHARLES MARSHALL, Druggist, Market street, Philadelphia. It is a limpid colourless fluid, which he marks *Liquor Ammoniæ Fort.* I would recommend practitioners to order it put up in two ounce phials, sealed. When sent out in pint or quart bottles, every time it is opened, it parts with more or less of its ammonia, becomes carbonated, and hence inert and useless, as was the case in that which I used in the third case recited, and which had very near proved fatal to the little patient.

Art. XIII. *On the uses of the Lymph.* By James Moultrie, Jr. M. D. of Charleston, S. C.

AMONG the phenomena which the operations of organic life are constantly presenting to our view, none seem more calculated to excite curiosity, than those which attend the formation and uses of the lymph. Setting aside the adhesive and disorganizing effects which are daily attributed to the proneness of this fluid to become itself organized, wherever it is lodged; there are few which seem to be so little understood, and in the investigation of which our labours have been crowned with so little success. It would be tedious, and perhaps useless, to consider all the different hypotheses which have been advanced upon this subject. The mistakes which have been so long current in the world, about this part of our constitution, as well as the light which recent discoveries in anatomy and physiology have thrown upon it, will justify me, however, I hope, in prosecuting the inquiry a little further; more especially in relation to those phenomena, which appear to depend upon the combination of it with the chyle in the thoracic duct.

A minute examination of the œconomy of nature evinces that all her movements in sustaining the organization of animals is gradual as well as progressive. Every step which she takes, either in production or regeneration, it is true, is manifested by change; but every change, it is equally true, is the direct result of that which preceded it, as it is the immediate forerunner of that which is to follow. Every part is mutually and reciprocally dependent. Nothing is abrupt and unconnected; and in the entire series of living manifestations to which each individual body gives rise, none are so constituted as not to appear as the increasing and necessary effect of a continuous train of organs and functions, which have been put into action for some common end. In the regular and progressive series which constitutes the whole *organic* existence of each individual, no part can be omitted without bringing that existence to an immediate close, or materially impairing the continuity by which it is preserved. And to apprehend the different steps of the process, and ascertain the links by which they are severally bound, each must be separately investigated, and singly and jointly understood.

Viewed in this light, the subject under consideration is peculiarly defective; and while other functions and formations have been investigated with a precision and scrutiny approximating to philosophical accuracy, this has been generally overlooked, and passed by with a degree of apparent indifference, not easily reconcileable with the refined inductions of modern analyses. While chymifaction and chylification are thus comparatively comprehended, the combination of the lymph with the chyle has hardly elicited attention; and little is therefore known of the reason for their meeting in the thoracic duct, or the relations which they subsequently maintain in the circulating system. To supply this deficiency is the object of the present paper; and in endeavouring to do this, I shall not rely so much upon the development of new facts, as upon the new relations in which I propose to place those which have already been discovered.

It is now long since the lymph, or that fluid which is found in the lymphatic vessels, was regarded as a heterogeneous combination, composed of alienated materials of the solids and fluids, which, having served a turn in the nutrition of the body, was now on its way to the emunctories of the system, and there to be resigned to the laws which govern inorganic bodies. The investigations of a more improved physiology, have, however, opened to us new views upon this subject, and in the course of the following speculations, we shall see good reasons for believing, that so far from partaking of this effete character, it is of a highly vitalized and assimilative nature, the ultimate result of many elaborative actions, and destined like the blood, to be again and again circulated, and employed in supporting the integrity and increment of the living edifice. In the meantime I would merely observe, that the influence of the former hypotheses in keeping up our erroneous notions respecting it, is obvious and inevitable; and there is little doubt in my mind, that it has contributed, as much as any other circumstance, in promoting and preserving that obscurity by which our progress towards a knowledge of its true origin, nature, and destination has been so long retarded.

Assuming for the present the truth of the latter hypothesis, in comparing this fluid with the chyle, we are forcibly struck with three circumstances: 1st. The relation of contrast which they sustain: 2d. Their immediate union, nevertheless, in the thoracic duct: And 3d. The intimacy with which they are afterwards united with the residuary blood of the system, and distributed throughout the body.

In examining these occurrences according to the natural order in which they arise, we have presented to us a catenation of changes and modifications, which from the uniformity and apparent mutual dependence which they exhibit, awaken in conformity to a law of the understanding, that universal conception of relation, to which in analogous instances has been appropriated the phrase "cause and effect." Now in tracing out the different stages of this catenation, and describing the phenomena of the sequence, in the doing of which consists the very act of philosophizing, we have incurred one of the only two fallacies, to which, according to a late celebrated writer, every system of philosophizing is liable. Nothing it is true has been *added* to make the catenation complete, which does not really belong to it; but a part of the sequence has been *omitted.* The statement of which is an essential part of it, and in which our labour now chiefly lies. Books on physiology are ample enough in their descriptions of the phenomena of chymification, sanguification, &c. but greatly defective in their accounts of the changes which are produced by this conjunction in the receptacle or chyliferous duct, and the inductions which depend upon a consideration of the prior and posterior circumstances attending this event, seems never once to have occurred to them. In their ardor for system-making, this has been wholly overlooked; and without the patience of protracted observation, they have passed at once, in a single leap, from an examination of alimentary digestion, to treat of the phenomena of sanguification, aeration, &c. In this particular, silence is nearly profound, and it seems to me, is either attributable to the erroneous views which have hitherto been entertained of the functions of the lymphatics, or the still more erroneous belief which was held concerning the character of the lymph. But to proceed—

The lymph, according to our assumption, and the acknowledgements of the present day, is a highly animalized fluid, fully endowed with the principle or property, which ever it may be, of life.

The chyle, on the other hand, anterior to its admixture with the lymph, is a *non*-animalized fluid, possessing none of those unequivocal manifestations which entitle it to be considered as vivific.

These *vital* and *non-vital* fluids enter into direct combination in the thoracic duct, to which they are carried by their respective vessels, and are afterwards more intimately combined as they are circulated through the heart, lungs, and capillary vessels.

Previous to this combination they maintained their respective characteristics; the former, like the arterial blood, which it is said strikingly to resemble, being uniformly homogeneous; the latter, like the materials out of which it is formed, as uniformly the reverse.

After it, however, their individualities seem no longer to exist, and their relations become materially altered. A new product is formed, complicated of each of them, is admitted into the body, circulated in its vessels, made to harmonize with its susceptibilities, and hourly supplies the common pabulum, by which its wants and necessities are satisfied. The lymph, insusceptible apparently of a higher change, is still separable from the state of combinedness into which it is placed, but the chyle being materially altered, is no longer distinguishable, and except, perhaps in some instances where this process has been incomplete, and assimilation therefore imperfect, is no longer to be reclaimed, nor to be discovered in that state of primordial individuality, which belongs to its chyliferous origin, it has in fact acquired new properties and new relations, and being essentially vitalized, bids defiance to all the known energies of our chemical and physical expedients.

If any two fluids, as opposed as these are in the possession or negation of the principle of vitality, had been suddenly brought together in a capacious reservoir—like the stomach, or bulging conduit—like the duodenum, instead of being silently transmitted, and gradually combined in so recondite a receptacle or tube—as is the thoracic duct; and their incorporation observed to be followed by a change so immediate and remarkable as that from inanimation to vitality, and the whole experiment conducted in such a way as to exclude, with the like hermetical closeness, every thing calculated to disturb the regularity of the process; is there a doubt but that some final cause would have been found for this contrivance, some positive use been attributed to the former, or the change effected in the latter been ascribed to the assimilative agency of the former? There can be little doubt, I think, that the phenomena would long ago have elicited observation, and the results satisfactorily explained. And yet, upon a review of all that takes place here, there appear to be no ideas forming this relation of the union of the lymph with the chyle, which do not also form that of the union of the gastric juice with the food, or the chyme with the bile, or the venous blood with the air in respiration; nor is there any thing which suggests to our minds, the belief of the relation of cause and effect in the one, which does not also in the other. We say, without hesitation, that the mixture of the gastric juice and matter of alimentation forms the chyme; the chyme and the bile, the chyle, &c. And why? It is evident that it is because the events follow one another in a train of priority and sequence which our minds are so constituted as thus to apprehend. And why not then, that the mixture of the lymph and chyle form another product, the nature of which is so different from either of its constituents before combination? or since the nature of the chyle has been changed, and an inorganic has been converted into a living fluid, that it is the province of the one which possesses vitality to impart it to the other which does not? If there is no difference in the relation which they severally manifest, there can be none in the inductions to which they lead; and there can be as little reason for suspending our confidence in the rules of philosophical criticism in the one, as in the other. The occasions are the same; the connections are the same; and the inference is precisely the same as that to which we have frequently before given our unreserved assent. It is of little consequence, really, how the manner of stating it is managed, provided the phenomena are brought into view in the precise order in which they arise: whether by a simple enumeration of all the prior and subsequent conditions, or, as in the case before us, by ascribing to the menstruum, which is *first* in possession of the quality to be imparted, the efficacy of a cause, and thus to confer upon it the natural agency of being instrumental in transmitting it to that which is *last*. Viewed in this light, one of the most important of its uses is undoubtedly that of animalizing the chyle, and preparing it for those ulterior depositions which it is destined to undergo. But the truth of this opinion will beget further confidence, when the facts and arguments which remain yet to be adduced shall have passed under review. In the mean time, however, I cannot avoid noticing the entire correspondence of this relation, with that of the order which connects, by a similar principle of association, the events of the moral and physical universe.

To those who have not minutely reflected upon the spirit of the inductive philosophy, it might be thought necessary, in order to establish the truth of this opinion, that I should prove the lymph to be possessed of a *superfluous* quantity of life. It is evident, however, that such a requisition implies an impossibility, and is, therefore, illegitimately assumed. As we are ignorant of the nature of the living principle, it follows that any endeavour to discover, or to form a conception even of its supposed action in imparting and receiving, must be altogether futile; for it cannot be measured or apprehended by the ideas of quantity and metastasis which our understandings derive from reflecting upon the mutations of matter. It may be observed, however, in relation to those who may think the proofs of this redundancy an important preliminary, that I know of no way of affording it, than by referring them to the very manifestations, for the production of which the proofs of that redundancy are required. It is in this way only we are able at any time, to prove a necessary redundancy on the part of the parent to procreate his oft numerous progeny; of the embryo itself, to grow to the magnitude of the new-born animal; or of this last, to attain the powers and developments of ripened maturity; and the error upon which this mode of reasoning is founded, becomes still further evident by a simple recital of the absurdities to which it leads; for upon this principle the atmosphere must also abound with it, otherwise the more exalted vitality of the arterial blood than the venous, must also be shown to depend upon some other cause than that simply of respiration; and even this required redundancy itself, whenever and wherever established, must be proven to depend upon some other previous redundancy of underived excess, existing in time and space, where our requisition must ultimately stop.

Very different is the nature of the question in relation to the qualities of that fluid. The effect which the doctrine of its effete character, and that of the absorbent agency of the lymphatics, have had in keeping out of view the phenomena now under consideration, and the intimate connection which the solution of these phenomena has with that of the hypothesis assumed, render it necessary that these doctrines should be subverted, and that this last should be established upon the most unequivocal basis. Notwithstanding the instances in which foreign articles have been found distinctly intermixed with the contents of these vessels, the opinion, I am disposed to think, is susceptible of the highest degree of presumptive reasoning, as well as of experimental elucidation, that the lymphatics are not the *natural* absorbents of the system; and that unmolested by artifice or disease, they are not *habitually* concerned in the daily decomposition of the body, or in the removal from it of any of its worn out or superfluous particles. Of all the changes of opinions which the lights of recent experiments have produced, none I apprehend, are so likely to be universally and irrevocably fixed, as that which regards this function as the exclusive and *healthy* office of the veins. Of the whole number of experiments which have been instituted for the purpose of trying this question, it is not among the least remarkable of the result going to establish my position, that so few exceptions have occurred wherein any of the substances used have found their way into these vessels, while nearly all of them have gone directly to establish the fact, that the veins and not they, are the appointed performers of this tributary work. And while this belief is in this manner directly supported by the fact, the opposite doctrine is contravened by the fact also, that the lymph throughout the system is always of a homogeneous nature, and not that heterodox of particles, which the older supposition imagined. It is on the contrary so nearly allied to arterial blood, particularly in that of its identicalness, as with difficulty, except in colour, to be distinguished from it; and like it will be found to be subjecting itself to the laws of the vital chemistry once again, to subserve the ends of nutrition and being. Upon the idea of its complicated derivation, we should have a right to expect directly the reverse of this to obtain; and as the particles are ever receding from the control of the vital energies, from their first entrance into the radicles of these vessels, and proportionally losing the ability to preserve their homogeneous affinities, to see them manifesting like the unassimilated chyle, the crudities which attend the diversity of its origin. The vitality and homogeneity, however, which under all circumstances it retains, leave us no other inference, as long as past exrience shall continue to be the guide of our present and future speculations in physiology, that these are characteristics which could only have been acquired by the most elaborate operations of organic life; and declare it in terms the most unequivocal, that it must have passed simple or combined, once at least through the lungs. Whether or not this unvarying character extends into the minutest ramifications —or seeing that the lymphatics extend far and wide throughout the system, and that each radicle has an appropriate destination, whether or not it is first adulterated with the matter of decay taken from each neighbouring territory, and then instantly cleared from this pollution by the filtering processes of the glands, or whether in the performance of this filtration there are two sets of vasa efferentia, the one destined to carry the heterogenous matter to the veins, the other to the lymphatics, is not material to the question. The proposition stands which ever of these may be adopted: if the latter, perhaps, it is the more confirmed, since from it may be inferred the early and particular care, which seems to have been taken in preparing it for the end which has been assigned it. Supposing this distribution of vessels to be correct, would it not be proper to consider the former set of vessels as appendages to, or radicles of the veins, rather than lymphatics? and is not this inference warranted as well by the nature of their contents, as that of their terminations? as the arteries have different terminations than those which end in the veins, so from analogy, the veins may be expected to have different origins than those which begin in the arteries. Where the structure is so minute, and the intertexture so intimate, our investigations must necessarily be attended with great degrees of incertitude; and where differences are to be assumed upon the intermixture of colours, we cannot be too cautious how we rely exclusively upon them. Among vessels, as minute and translucent as the early lymphatics, one would imagine it an easy matter to mistake the reflections of neighbouring vessels for hues intrinsically possessed, or supposed to be possessed by them; and to believe a modification of colouring to exist where it in fact does not. We know that our own countrymen, LAWRANCE and COATES, were nearly imposed upon in this very way, in one at least, of the experiments which they had been engaged in performing with colouring articles on the lacteals; and I think their supposition of the manner in which Mr. JOHN HUNTER may have been deceived, and thus the reports of MAJENDIE come to differ with his own, by no means improbable. If then a deception can arise where the anatomy is appreciable, or can be made so to the moderately assisted eye, how much more readily may it, where the difficulties are so much greater? One thing which heightens the probability in this instance is, that if the lymph and excretory matter are contained in the *same* vessels *before* filtration—as the *vasa efferentia* are not only less numerous but larger than the *vasa inferentia*, and the colouring matter must consequently be deeper *after* separation than *before* it, the eye being keen enough to discern it in the former instance, ought more readily to have discerned it in the latter. Now my recollection does not serve me to say whether or not this is the fact; but if it is so, the inference is so obvious and necessary a one, that its not being noticed may be assumed as a presumption that it does not exist. When we remember that the volume of blood which is created in the lungs is not destined to remain therein —that the unvarying purpose of *healthy* respiration, is to *get rid* of the carbonaceous principle—and that the *proper* vessels of nutrition are not larger nor more numerous in the lungs than other structures, the powers of composition and decomposition being here balanced as elsewhere, no reason can be found why upon this principle the absorbent vessels of the lungs should more abound with this matter than those of other organs; and it seems hardly probable that an effect differing so much in intensity here, from what is found to prevail throughout the whole of the system, should be owing to a cause not universally present. If it was the *particular* office of the lungs to secrete carbon, then the black matter which is found in the said vessels, here, may properly be ascribed to the alleged cause, but as this is not the fact, any more than the skin, or that tissue in which it first makes its appearance, this instance cannot be referred to as an example or evidence, in which each lymphatic radicle absorbs from a neighbouring tissue as from a territory of its own, the matters it contains. And with regard to the bilious discolourings of the lymphatics of the liver—another of the most remarkable of the instances which have been supposed to establish the theory—besides that the manifestation of the presence of bile is not stronger in the blood of the hepatic veins or ascending cava, than that of the rest of the body—it may be inquired if the phenomenon seems to be a natural one, that a fluid which is ostensibly formed for *reproduction*, should at the same time be treated as *excretory*, and as such be taken up by agents whose acknowledged, and I would also add exclusive office it is to be concerned in this matter? The fluid in the *inferential* vessels, according to this hypothesis, is a product of the *proper lymph*, and the *cast off* molecules of the neighbouring tissues; now the bile in the *hepatic* inferential lymphatics, must, according to this view, be the *cast off* molecules likewise, otherwise the example does not apply; and if it does, then are we presented with the anomaly, of a fluid being at the same time both secretory and excretory. And may not the same reasonings be applied to all the other examples which have been so variously adduced? Majendie has said that the lymph is the same throughout the system, whether taken from a lymphatic vessel or the thoracic duct, and if in addition to the foregoing remarks, it is also remembered that it is an animalized fluid, the distinct formation of a distinct formative power, I think his opinion will be found to remain unaffected, notwithstanding the ingenuity of the ratiocination, by which its heterogeneous and diversified origin has been attempted to be established.

If we examine the œconomy of the veins, we shall find the reason not less cogent for believing in the doctrine of their exclusive absorption. To fulfil the purposes of nutrition, the blood must be liberated from every thing like adventitious mixture. Upon this necessity is apparently founded the institution of the depurative processes. The black blood contradistinguished to the red and the lymph, is not only more complicated in its nature, but, from the relations which it bears to these fluids, and to that of the secretions and excretions of the body, is at the same time by far the most liable to depuration from foreign admixture. Hence it may be expected, in the course of its circulation, not only to give rise to the most diversified of impressions, but under certain contingencies, to prove the most deleterious in its effects. To guard against the inconveniencies of the first, and to provide a remedy against the last, the vessels in which it circulates are endowed apparently with a modification of susceptibility, which is not less distinctive and characteristic than that which belongs to any of the specific tissues. By this their minute branches are enabled not only to take up every thing which is destined to be absorbed, but the very articles even, with which nearly all the physiological experiments relating to absorption have been conducted, and to bear with impunity, for a while at least, the varied actions of the diversified agents, to which they are normally or inopportunely exposed. They are also better qualified for the task of doing that which was ascribed to the lymphatics—removing the superfluities of nutrition, or the excesses of morbid increment. To this modification of vitality may also be ascribed their protection against an agent of known and admitted fatality, and their general adaptation as reservoirs for containing, until they can be removed from the body, the many materials, natural and adventitious, which, under a diversity of circumstances abide within them.

But as much of what has been said is predicated upon the homogeneousness of the lymph; and as this is a property, which, under the exceptions intimated, belongs also to the blood of the veins, a question may arise as to the validity of the opinion, that the exonerated particles of nutrition do find their way into it, and become one of its constituents. The answer to this inquiry is involved in that of another, and is intimately connected with the explanation of it, viz.: what is the nature of the process by which the carbon, which abounds therein, is generated, and the true relation of that substance to the animal organization? This question is an interesting one, but notwithstanding its apparent embarrassments, I am not without some hope of being able to approach its elucidation. To answer it satisfactorily, perhaps, ought not to be pretended; for to be able to trace the whole of the minutest changes through which the food of animals passes, from simple alimentation to elaborated secretion and excretion—and to point out the intimate and intermediate separations and reunions of its constituent principles, is what the most sanguine physiology can scarcely hope to accomplish. Analysis, however, has ascertained that it always consists of the four simple elementary substances—oxygen, hydrogen, nitrogen, and carbon; and we know, that after having undergone a variety of mutations affecting their chemical relations, they are again eliminated from the body, under divers states and modes of recomposition. May not the pulmonary transpiration then, be one of the modes of recomposition, in which the *oxygen* and *hydrogen* are eliminated? The cutaneous another? And the serosity of the urine a third? Is not the *carbon* itself, in fact, an exemplification, in which one of those constituents escapes in an uncombined state? And does not the highly azotised state of the urine justify us in believing it to be another of those exemplifications in which the *nitrogen* is separated from the same? Ure says, on the authority of Dr. Berard, that "as urea and uric acid, are the most azotised of all animal substances, the secretion of urine appears to have for its object, the separation of the excess of *azote* from the blood, as respiration separates from it the excess of *carbon.*" And we are all familiar with the fact, that the quantity of moisture which escapes from the body, does not at all times bear a direct ratio to the quantity which is consumed. Under pathological circumstances, it is even greatly disproportioned; and this has been ascribed to cutaneous or pulmonary absorption; this we shall see some reason hereafter to doubt; and the phenomenon must therefore remain wholly unaccounted for, unless it be attributed to some such operation as that which is herein hinted at. And with regard to the *carbon* which so suddenly appears at its formative juncture, unless it be regarded as one of the modes of this elimination also; and its presence in the radicles of the veins received as evidence of a peculiar action in the capillaries, separating it for their reception, its existence must remain wholly insolved; and I must acknowledge my failure in attempting to reach what was proposed in the foregoing proposition. On any other ground, the sudden formation of so insalutary a principle is wholly inexplicable. From these data I should therefore infer that it is the chief if not the only effete matter, which the *powers of absorption* are, in the situations assigned, regularly interested in removing. The exact spot in which this action takes place, is wholly immaterial—whether in the veins, the capillaries, or, as it were, in transitu, and the mystery of the process is not greater than that of the formation of any one of the animal compositions. It is evident that if the œconomy of nature is able by means of certain organic contrivances to overcome the elementary affinity of our food, and to separate therefrom the previously unformed chyme, chyle, blood, bone, urine, &c. that it manifests powers which require but slight variations to make them fully competent to their revival, and consequent elimination in any of the states and modifications which have been stated. It is with the *existence* of the carbon, however, the *fact* itself, and the circumstances attending its sudden formation, and not with the *mode* or *precise seat* of its action, that I am now interested; and to these I would extend the inductive statements, which have already been applied to the commixture in the thoracic duct of the lymph and the chyle. The time and space in which this operation is effected, as in most other instances, is manifestly short, but the new relation in which it presents itself, is in perfect compatibility with the consecutive phenomena of respiration, and developes a connection between them, which brings into perfect harmony the two extremes of the two great vascular systems. In whatever other light then the venous system may be viewed, its office, in this respect, is essentially residuary; and is strikingly contrastible with the tributary functions of the arteries and lymphatics.

Viewing the three systems under this relation, the circle of organic functions appears to be complete. Hitherto this has been unwittingly overlooked. The custom has been in tracing the successive series, to begin with the introduction of the matter of renovation into the stomach, and when we had proceeded through all its transitions to where the *direct* assimilative functions terminate, to rest satisfied with the success which seemingly attended us; hence the accounts of our progress thus far are regular and connected; but in returning to begin the series again, observation has been less minute in tracing the *indirect* to where former begin, and hence the accounts of our retrogression are entirely wanting. The true relation of the intermediate link remains unnoticed, and our march has been abrupt and made as it were by a bound. What adds corroboration to these observations is, that if the carbonaceous matter is not "ipso facto" the effete matter, nothing else is to be found in either of the two systems between which the disputed function lies, which can clearly lay claim to that denomination—nay, if its existence be not taken as the evidence of that absorption by which the opposite power of renovation is balanced, I know not by what other means that doctrine can be either exemplified or maintained. The truth of this opinion appears again, not only in the fact of its insalutary influence wherever it abounds, or whenever it is retarded, but in the extensive provision which is made for its direct and uniform removal. I am the more disposed to dwell upon this particular, because the truth of it appears to throw additional light upon the long disputed question relative to lymphatic absorption, and to explain some other phenomena which otherwise are totally inexplicable. Considering its now extraneous relation to the living actions of the tissues, the reason is seen at once why the tides of renovation and decomposition should be steadily balanced: if the carbon of the venous blood is the true matter of defœdation, as the chylo-lymphatic fluid is of nutrition, then is it obvious that the one must be regularly receding as the other is advancing; and this is what is actually found to be the case.

In accounting for its fatal opposition to the actions of the vital principle, it is usual to regard it as operating in a way which is wholly specific; but if it be of the nature which is herein supposed, are we not warranted in questioning this rationale, and in referring its effects rather to some more general law of the œconomy? Is it not indeed an individual exemplification merely of that universal rule, by which *all* foreign substances introduced into the circulation, become more or less insalutary? Being unassimilated or set free from a state of nutritive appropriation, the relation which it previously sustained no longer exists—its adaptation to life is lost—it has become relatively adventitious—the susceptibilities no longer tolerate it—and hence it can no longer abide within the body, except in a constant progress towards ejectment from this excretory reservoir without jeopardizing the sanity of the functions, or producing instantaneous death. Independent of its morbific incompatibility, its delay therein leads to a congestion, and standing in the way as it were, of the new supply of the blood of the arteries, it impedes and disturbs that easy and uniform movement of the solids and the fluids, in which the state of health may be succinctly stated to consist.

In the reduction of so large a proportion of the depurative matter to an elementary unit, much of that embarrassment is undoubtedly saved, which would have accompanied a more diversified excretion; and in the simplification of the process, by which this effect is secured, we behold another example of the determination to maintain without exception, the universal law of *determinate relations.* Every function manifests a double relation: one to the constitution of its organ, the other to its proper stimulus, as the structure is one, and the function is one, so is the stimulus usually one also; and it seems not unlikely that the apposite simplicity of the last in this instance has been modified in obedience to the foregoing principle. If this be the true relation of circumstances, the disparity in extent between the two systems is explained, and the reason is at once seen why the venous blood is so much more abundant than the arterial: the veins in fact are not only reservoirs which contain the relics of the arterial blood, which have not yet been assimilated, but of that of the solids and fluids which are to be excreted.

It is usual, I believe, with writers, in adverting to the difference of temperature between arterial and venous blood, to ascribe it simply to a manifested change in the capacity for caloric. That this change is implied in the difference is an acknowledged fact, for our minds are so constituted as to suggest to us in every change a capacity in the subject of it for change, as it does in that of every product the ability to produce; but this is only an implied condition, arising spontaneously from the knowledge of a fact. Now the question here refers not to the *capacity* itself, or the *ability* to produce, but to the *cause* of the change of capacity, or the *antecedent circumstances* which have been instumental in producing it. The analysis of this phenomena goes a little beyond, therefore, what has been attempted, and endeavours, upon the strength of the preceding explanations, to point out the *prior* relations on which the change of capacity depends. It will be found, I apprehend, in the application of the foregoing views, and has an unvarying relation to some accident which is ever present in the one species of blood, and ever absent in the other. Instead then of searching for it in some remote law of vitality which has hitherto been undiscovered, would it not be more philosophic to look upon it as the immediate consequence of the formation and presence of a substance inorganically related to life—in itself incapable therefore, of generating caloric and being proportionally uninfluenced by the organizing principle, is, therefore, labouring under an increasing proneness to suffer its diminution. Anterior to nutrition, the vitality of the circulating fluids being strong, the generation of caloric is proportionally great; but after it, the same fluids being mixed with foreign particles which the vitality has ceased to control, the generation of it is proportionally weak.

Whether or not fancy has had any share in pushing these speculations beyond a legitimate limit, I cannot at present determine; but if they are found to be valid, may we not upon the same principle also, partly, at least, explain the coldness attending what has been called the congestive states of fever, and those analogous local affections, in which a similar inequilibrium of circulation is said to exist? From the slowness of respiration and the general torpidity of the skin, nothing seems more rational than to expect that their decarbonizing functions should experience a considerable depression; and where this principle is suffered to accumulate in quantities disproportioned to its escape, it seems equally rational to expect the very effects which are found to follow. The sensorial oppression too, which is a usual concomitant of this state of things, is another of the phenomena which I think is most easily accounted for upon this principle; and from the agency which the nervous energy has been shown to exert in the generation of animal caloric, furnishes additional testimony in support of the solution—the effect in this latter instance, however, is secondary and not immediate.

The excretory action of the lungs is universally admitted and very generally understood. But as their absorbent action is perhaps more generally received than definitely apprehended; and as the doctrine is incidentally connected with the principal object of this inquiry, I will take the present opportunity to make a few remarks upon it.

The air is the natural excitant of the lungs, and the grand medicine by which all new properties are therein imparted to the blood. All experiments relating thereto, show that although it undergoes a decomposition in the art of respiration, neither of its constituent elements are absorbed. The two other accidents usually united with it, are humidity, and a small quantity of carbonic acid gas: the absorption of the first is incompatible with the extent of pulmonary transpiration, and the last with the separation of carbon from the veins. With regard to the experiments which have been instituted with artificial gases and odoriferous substances, I confess myself not altogether satisfied that this is really the channel by which they make their way into the circulation; besides, that I have something to object to the individuality of the experiments, and the general nature of the inferences which have been grounded upon them; and these will apply, I apprehend, as well to the doctrines of cutaneous and lymphatic absorption. Every experiment is in itself individual, and if successful, establishes two positions: 1st, it proves the existence of the function, *under the circumstances given*, in the vessels where the substance experimented with has *directly* entered them; and 2d, it proves the entrance of the *particular* substance with which the experiment is made—and beyond this it establishes nothing. The experience which we derive from this individual discovery goes no further, and informs us not in the least in relation to the admission of other articles: the *general* question of absorption it leaves untouched. Each experiment and each substance speaks only for itself; for each tissue has its particular mode of vitality, and its particular relation to an excitant, by which alone its *normal* action is supported; and the abnormal are too indefinite, and depend upon too many contingencies, to allow of a *general* inference, where the proposition is purely physiological. No reliance is to be had in the determination of the *general* interrogatory, where each separate affirmation or negation must depend upon the success or failure of each particular experiment, undertaken with substances having no *healthy* determinate relation to the parts experimented upon; and where we artificially set up a train of phenomena which otherwise could not arise. If the stomach is revulsed by tartar emetic, or the same effect is produced by hernia or intususception, it does not follow that vomiting is a *physiological* operation of that organ, or an inverted peristaltic motion that of the whole alimentary canal. If a moderate quantity of water finds its way into the air-cells of the lungs, or any other substance which is not absolutely fatal from quantity or quality, it probably will be removed; but this in like manner does not show that when the lungs are not thus circumstanced, one of its functions is imbibition from without. What is *artificially* and only *temporarily* induced, is no evidence of what is *naturally* and *permanently* taking place. Nutrition and absorption are functions which belong to all parts of a living body; but the absorption herein referred to, has nothing to do with the present question, it is interstitial and distinct from that which is supposed to add to the nutrition of the body by drawing upon resources that are external to it. In this latter respect they appear to be constructed upon a plan which is in perfect congruity with that of the skin, and to be destined to act in conformity to this latter organ, in the *elimination only* of excretory products. When compared with the muco-gastric and intestinal surfaces, they present a contrast which strikingly accords with the modern investigations of European pathology; and may be said in this particular, and the forced exceptions of which they are susceptible, to bear some resemblance to the polypus, the internal and external surfaces of which are said to be absorbent or eliminatory, according as their natural relations are retained, or the animal is *experimentally* inverted.

But if the acquisition of any additional property to the blood by the power of absorption is denied, and the act of respiration is simply confined to that of its decarbonization, it then remains to be inquired by what agency has the arterial blood acquired that greater vitality in its passage through the lungs, by which it is said to be eminently distinguished from the venous. That this is not a property which has passed into it from the atmosphere, is susceptible of absolute demonstration. That element, the motorial compound of two material inorganic substances, neither is endowed with the power to originate it, nor to add any thing to the *quantity* which was originally possessed. The question here occurs to us, however, is it the result of the *outward* chemistry and *physical* laws, or of the *inward* and *vital?* Little hesitation can be felt in replying to which of the two it belongs. Notwithstanding the experiments of FRAY, SPALLANZANI, and BONNET, in favour of the hypothesis of dissemination, I think it may be assumed, without incurring the allegation of a "petitio principii," that this effect must be sought for in some already existing provision within the precints of the organization, the agent of which being already vitalized, is qualified to produce it. "Life," says CUVIER, "is the product only of life;" and the occurrence of every vivific change, as well as of every organic result, in obedience to this principle, are the exclusive effects of the operation of it only. Physical agents may excite to a more perfect development of its manifestations, or derange them by rendering the organs incompetent to a display of its healthy powers; but in this they neither evince any ability to beget, or to add one iota to the indivisible essence.

To what agent shall we then ascribe it? The determination of this naturally leads us to another of the properties of the lymph, which will come to be considered as we proceed. In the mean time it may be proper to see if the fact which is assumed really exists, and to be certain that the arterial is more living than the venous blood. For my own part I do not conceive that by the simple conversion of the one into the other, any thing has been actually *added* to augment the amount of it in the former. A foreign and useless substance has been removed, by which certain changes are suffered to arise, and it is to the negative influence chiefly of this removal in promoting a *vital concentration* of the lymphatic or fibrinous portion of the arterial blood, that I apprehend the phenomena to have its cause. BLUMENBACH observes in his physiology, that a variety of phenomena "demonstrate in a most striking manner, the superior importance of this lymphatic portion, in which the vital principle of the blood appears *immediately* to reside:" so that what has been considered an *accession* of vitality, is probably owing only to a closer play of the affinities, consequent to the removal of an element, which while present had the effect of opposing this vital concentration, and consequently of keeping the sanguineous molecules at a greater distance from each other. The effect, therefore, is one of the *inward* chemistry and vital laws, and not of the *outward* and atmospheric: it is the result of a property belonging in a particular degree to the lymph. As in the physical universe, the manifestations which therein arise, are referred to the powers of gravitation; and in the organic, those which are connected with the solids, to the laws of vital contractility, so in the organic likewise, those which are associated with the fluids must be referred to a modification of the same operative principle. Contractility in fact is a universal property of life; and in the tendency which it has towards a universal organic consolidation pervades both the fixed and moveable particles of the body.

The views which have been taken in the preceding parts of this paper, are strengthened by a consideration of the manner in which the lymph is formed, its nature, relations, and apparent place of origin. Anatomy teaches us that it is found, not sensibly diversified in veins, arteries, and lymphatics. In which of these does the function reside by which it is fabricated? Each originates and terminates in the others forming thereby a circle, in some part of which the above proposition requires to be located. 1st. Of the veins.—Is it formed in these? Their offices; the nature of the fluid which circulates in them; and that of the operation which we have seen some reason for believing is carried on in their minute ramifications, are utterly opposed to this idea. In the order of time, the venous circulation is secondary to that of the arterial, and this together with the termination of the receptaculum chyli, and that of the divaricating lymphatics, show that the lymph which herein exists, is derivative solely. 2d. Is it formed in the arteries? From the termination of that receptacle, and the continuity with it of the pulmonic arteries and veins, it is evident that they, as well as the veins are indebted to this latter organ for its existence in them also. It is evident then, that in fixing the manner in which the lymphatics become possessed of it, I shall at the same time determine the proposition which is now under consideration. But hitherto we have moved only in a circle, and as these vessels are said to terminate in each other, it may be objected to, that as the arteries receive it from the lymphatics, so do the lymphatics receive it from the arteries. And yet it is evident that a fluid so elaborate could not have been formed at once; and that there is some tissue which is destined to provide it. The fact is, all of the arteries do not terminate in lymphatics any more than they do in veins; but some of them end, as do all the other vessels likewise, in that tissue which from it minuteness and great delicacy, has been called the capillary tissue. They communicate, it is true, but I believe that communication to be indirect. Whether that tissue be really vascular, or partially or wholly parenchymatous, is foreign to my purpose to determine. It is here, however, that the lymphatics arise; and it is here also that I conceive it will be found their fluid, in common with all the secretions of the body, is in like manner fabricated. Not, as our proposition imported, in either of the three foregoing systems of vessels, but in the parenchymatous or reteform structure, which either envelopes or constitutes the "minimum visibile" of our frames. Nothing but the interposition of this structure, and the necessity which results from the preceding review of locating this function here, saves us from the absurdity of supposing a physiological anomaly, viz. that of a fluid moving in a complete circle, having neither origin or termination; without any provision for the varying necessities of the body from infancy to old age; and without experiencing any alteration in the whole of its course. Our former notions derived it from the internal cavities and interstitial spaces: not so our present ones. According to these it is in the aforesaid structure it has its origin; and it is in the same structure that those movements begin, which, however little understood, are to transmit it into the lymphatics, veins and arteries, for the various uses it is destined to subserve in the course of its circulation. Its existence in all of these vessels then, is secondary and derivative; and the *new* supply, (which previous to this secretory function has no *determinate* existence,) is a product which has been formed by the action of this structure, out of the chylo-lymphatic combination transmitted to it through the medium of the arteries. Hence the first step towards it is alimentation, and the last a *specific* action which belongs to the capillary structure. Considering the number of stages of this process, from the first to the last result; the progressive animalization of the thoracic compound; the striking resemblance of the lymph to arterial blood, previous to its combination with the chyle; its derivation therefrom; its being in its *pure* state, the *last* of the animal products in the whole series of assimilative changes, and the *first* to be mixed with the crude and as yet unassimilated; I think we have the most conclusive evidence of its being the transcendental result of a *determinate secretory function* having its seat in common with the rest of the nutritive actions of the body. And if to these considerations we call to mind the observations which have been already quoted from Blumenbach, and recollect that it is the most important of all the animal agents in the reparation of bodily injuries; that it constitutes, in the ovarian state, a large proportion of the nascent structure of all animals having their origin ab ovo; that there is good reason for believing it to be the blood itself in a certain race, which, from the absence of the colouring particles, has been called "white blooded;" and that it is also in this race we witness the most extraordinary manifestations of its reproductive power, as in the restoration of the head of the snail, &c. &c.; the impression of the truth of the doctrine which I have inculcated, falls little short of the most absolute conviction.

It is perhaps not the least of the recommendatory advantages of this doctrine, that it points to some direct and positive use, for which so important a compound has been instituted. In doing this too, a link is supplied, which hitherto has been wanting to make the automic cycle of organic actions perfect: the two extremes of digestion and nutrition are made, as it were, to meet; the boundaries of the direct and indirect series of organic functions are brought into apposition, where the molecular affinities conduct the intricacies of composition, and resolve those which have become extraneous. And instead of a straight forward train of alterations, in which it is impossible to imagine by what provision the train was to be renewed and kept in motion, we are presented with a revolving sequence, in which the co-operation of the antagonizing powers of composition and decay, for the preservation of the individual is explained in an intelligible way. Formerly, when the chyle was formed, and its course traced to the heart, and its vitality therein recognised, the next step was to follow the blood augmented by this new supply to the lungs—to examine its alterations, and retrace it to the heart; then to pursue it through the arteries till it is lost in the capillaries; and, finally, having resigned it to the laws of textural appropriation to suppose that the assimilative functions were terminated, and that the arterial blood having been in an unknown way reconverted into venous, was straightway returned to the heart, from which it began to repeat its rounds as before. In the whole of this prosecution and inquiry, the means was never hinted at, by which, the invisible structure, while it was removing the impediments to renovation, was at the same time fabricating a menstruum, which by mixing with, and affecting, and vivifying the chyle, was to prepare for, and to resume the repetition of the series. It is probably owing to the little attention which was bestowed upon these phenomena, and the necessity which was at the same time seen that the explanation of the animalzation of the chyle should be made before the venous blood in the lungs became arterial, that physiologists have been so universally led into the general fallacy of ascribing to the influence of the atmosphere, that which has been shown to belong to other causes. Considering the remarkableness of the phenomena which then arise, the want of knowledge in relation to any preliminary action which could explain it, I cannot conceive how they could have arrived at any other inference: it could not, under presenting circumstances, have been located elsewhere. But it is evident, as the change from inorganization to life is the greatest, as it is also the most sudden that we ever behold, that the agent which is thus destined to produce it, must be previously endowed with all the requisites to its fulfilment: it is not surprising therefore that a process so elaborate, should be instituted to effect a purpose apparently so remote. According to the theory which has been advanced, the atmosphere, except in an indirect way, has nothing to do with it; but the change is the plain and undiminishing effect of that vital concentration of the particles which characterize the living solids and fluids of every organized body. It is exemplified in its powers of manifestation in the coagulation of the blood, even after it has been drawn from the vessels; the pleuritic crust; the membrana caduca of Hunter; and the membranes of inflammation—all of which, particularly the first, intimate to us something of the process which secretely attends the vital consolidation of the fluids. It is this which seems to determine the infinitesimal arrangements of the textures, as well the sensible and even voluntary contractions of the muscular system. That the chylo-lymphatic combination should therefore display increasing manifestations of it, when mixed with the blood, is nothing out of the way, and calls for no new search after principle to enable us to explain it. RICHERAND observes, in relation to this product, that when abstinence has been continued for a length of time, this fluid, (meaning that of the thoracic duct,) appears to be nearly altogether lymph, approximating, as the abstinence is prolonged, nearer and nearer to the properties of blood; but if it be collected soon after digestion in the stomach has been completed, that it appears to be of a nature entirely different—separating after rest into two parts, the one a *watery* liquid, the other a semi-transparent *gelatinous* coagulum. Now if the results of animal chemistry are to be relied on, this *watery liquid* and *gelatinous coagulum* denote its imperfect composition, and indicate it to partake of the nature of an animalized fluid, united to one which is not. The composition, in short, exhibits precisely that intermediate degree of vitality which we would expect to find, considering the particular stage of the process—evincing less of it than blood, and more of it than chyle.

Majendie entertains the opinion that the lymphatics are appendages to the veins, receiving from the arteries that portion of their blood which has not been distributed by the common route, and returning it to the heart. A retrospect of all which has been delivered, represents them, to my apprehension in a very different light, having no such relation as the term imports, to either arteries or veins; but as a distinct system, formed for a special purpose, and bearing the same functional relation in the changes which are produced in the thoracic duct to sanguification, which chylification does to it. Viewing the process under this relation, as a preliminary step to sanguification, we are saved from the gratuity of imposing upon them supererogatory duties, and avoid thereby the unphilosophic proceeding of attributing, in the same spirit, a wasteful expenditure of contrivance to nature, which she no where displays in any part of her province. It doubtless would have been superfluous in her to double her apparatus, for effecting that which the veins alone are apparently fully able to accomplish; and if the lymph is withdrawn from the general current only to be returned to it again, I must confess I cannot see where lies the wisdom in its having been withdrawn at all. The veins, there are undoubted reasons for believing, are the universal absorbents of the body; and if incorporation and comminute mixture had been the objects of this arrangement, it has evidently failed, for it could have been more completely accomplished without than with it, inasmuch as the combined fluids would otherwise have had to undergo the *whole* round of the veins, before the demand for more blood was required by the arteries. The supposition subjects us to another gratuity also; that of making it a matter of entire indifference, whether or not the chyle be directly or mediately incorporated with the general mass of the blood.

It may not be the least valuable part of the foregoing considerations, that collectively they afford a plausible elucidation at least, if not the best, of the anatomical relations which have been reviewed, and their respective and connected uses.

The veins, according to this theory, arise exactly where the largest proportion of what is here considered the effete matter of the body, is set at liberty from the tissues, and terminate at the exterior of the largest excretory organ, where it is eliminated: they are therefore arranged according to the most favourable plan for performing the functions which have been ascribed to them, and in this they are much aided, by the direction in which their blood is made to circulate.

The arteries, on the other hand, consistently with the same plan, are arranged directly the reverse of this: they begin at the nearest practicable point to the source of the chylo-lymphatic supply, and terminate in that general animal laboratory, where every thing which is distributed to it, is sooner or later turned to a proper account: they also are therefore well adapted for performing the task which has been allotted to them.

Between the extremes of these two systems, we have on the one side the excretory organs, particularly the lungs, and on the other the parenchymatous or capillary, or secretory structure, both occupying an intermediate location between the direct and indirect apparatuses of composition and decomposition, and deriving from this situation every advantage which the relation can afford.

The former, by the double relation which they thus maintain, are truly made the great safeguards to the system, removing whatever is unfit to be transmitted from one apparatus into the other, and thereby defending to a certain extent the organs and tissues from the intrusion of adventitious matters, or whatever is likely to prove deleterious to them by reason of their extraneous relations.

We thus see the final cause of an occurrence which was formerly alluded to, viz.: that notwithstanding the variety of substances with which the powers of absorption have been tried, so few have found their way directly into the lymphatic system, while nearly all of them have done so into the veins: and we thus see also how it is, that odoriferous substances which have been conveyed or have found their way into the stomach, and passed through the portal ramifications into the vena cava, soon find their way out by the same channel, and are speedily recognized in the breath. The same offices are no doubt performed also by the kidneys and the skin; but it is evident from the above facts, and the peculiar situation of the lungs, that by far the largest amount is separated by the latter organs, and consequently that the former have comparatively but little to do.

In this separateness and mutual dependence of the two general systems of vessels, they bear an analogy to the anatomical relations of the systemic and pulmonic, each carrying on a distinct circulation but jointly co-operating to establish a single uniform one; and by their uncomplicated and unembarrassed relations, affording the happiest facilities towards the accomplishment of the wasteful and restorative operations.

It must be evident now, I think, in the arrangement of this general apparatus, in which the parts are relatively constructed for some common end, that to have incorporated the lymph directly with the mass of the venous blood, would have been to subject it to many inconveniences, which by the disposal actually adopted have been happily avoided. By keeping it separate, its purity is undoubtedly preserved, and it seems obviously thereby better qualified for achieving the ends which I have endeavoured to show it is destined to perform. Any other distribution of it is incompatible with its specific origin, vivific nature, and the insurmountable necessity which seems to have called for its preliminary union with the chyle in the reservoir of PICQUET. It makes nothing against this theory, that all of the lymphatics do not terminate in the reservoir; the necessity is *partial*, not absolute, and in fact if we compare all of these vessels with the veins, and the ultimate union of their several fluids in the auricle and ventricle of the heart, we shall see reason, I think, for considering the collateral lymphatics which enter directly into the veins, as so many miniature thoracic ducts, and the thoracic duct as a coloſsal lymphatic. What lymph goes by the former channel into the veins is destined for the use of the venous blood: what goes into the latter, for the use of the chyle.

It is thought by some, that the valve which is situated at the entrance of the duct into the subclavian vein, is intended to prevent the lateral passage of the blood into the duct; by others, that it is to restrain the entrance of the chyle into the vein, and to occasion it to flow towards the heart in a slow and gradual stillicidium. Which, if either of these opinions is entitled to an exclusive regard, I am not concerned to know; either, or both of them, however, corroborate the theory which has been advanced; of the necessity of the purity and separateness of the lymph, and its preliminary union with the chyle in that receptacle. The utility of placing a guard at this spot, however, is not greater than the advantages which have been gained by concentrating the terminations and origins of the different vessels at the heart. By this method, whatever may be the diversities of the capillary action, so far as it is liable to be influenced by the momentum of the circulation, and the general distribution of the blood, it becomes subjected to the control of one influencing organ: the *relative proportions* in which the circulating fluids are thus drawn into the heart and divaricated from it, become fixed and determinate; and the homogeneity of the blood is settled and preserved upon principles having the apparent uniformity of a law. Directed by this common influence, the Picquetian compound, manufactured out of definite quantities of chyle and lymph, are received into the right cavities of the heart; and in the same proportions uniting with relative quantities of the venous blood, and the lymph from the right arm and side of the neck, is transmitted to the lungs. Being here exposed to the action of an agent which is composed of a definite proportion of elementary constituents also, it is presumable that it undergoes a like definite variation; and is in this state returned to the left cavities of the heart, entering into general circulation, it is in the same state distributed to the tissues; and having at length satisfied their elective wants, terminates the series of what I have ventured to denominate the *direct* assimilative functions, and at which it was remarked our *straight-forward* investigations ended. And if the influence of this power is felt through the momentum of the circulation in the capillaries likewise, a fact which it seems cannot be denied; does it not also contribute, in a high degree, to preserve the equilibrium between the functions of composition and decay, and thus, to regulate even in its minutest adjustments, relations which are observed every where else to prevail? A more perfect device for maintaining the harmony of the vital functions cannot be conceived; and the congenity and consistency which seems to pervade every part of the plan, are additional proofs of the truth of the foregoing speculations.

It is thus that the œconomy of nature is preserved. An animated circle of reparation and ejection is continually revolving: and as in the species, every being is destined not for its own happiness alone, or its own isolated existence, so in the individual every organ and every function is created not for its own duration only, but for that of the other organs and other functions also, to which they are related by the ties of a common necessity.

I will now close by recapitulating the points directly or incidentally embraced in the foregoing essay, which the leading arguments appear most effectually to sustain.

1st. The lymph is not a residuary fluid transmitted by a special route from the arteries into the veins; nor the decomposed matters of the tissues, which it is the special office of the absorbents to remove.

2d. That its origin, nature, and destination, render it probable that it is a *special secretion*, or the product of a power closely allied to it.

3d. That its office is, in the first place, to vivify the chyle; in the next, to augment the animalization of the arterial blood; and lastly, to produce all those effects which constitute the phenomena of reproduction, adhesion, &c.

4th. The lymphatics are, consequently, not the absorbent instruments of the body, and in a state of health are not in the least concerned in the imbibition and removal of dupurative matter.

5th. That this power is proved by positive facts and by argumentation, to belong exclusively to the veins.

6th. That the quantity of the carbonaceous principle in the venous blood is corroborative evidence of this, and is to be looked upon as the effete matter itself.

7th. That it is the cause of the difference of temperature between the arterial and venous blood, and its elimination in the lungs the only change which is effected by respiration. And,

Lastly. That the lungs are, physiologically, not absorbing organs; and in this respect, as well as several others, are allied to the skin and opposed to the stomach and alimentary passages.

ART. XIV. *Case of Poisoning by Cantharides.* By A. W. IVES, M. D. of New York.

ON the evening of the 7th of March, 1827, I was called to the House of Refuge for Juvenile Delinquents, to see William Cummings, a healthy, athletic lad, seventeen years old. In a paroxysm of anger he had swallowed about an ounce of *tincture of cantharides*, supposing it to be laudanum. I saw him at nine o'clock, about an hour and a half after the poison was taken, labouring under the following symptoms:—hurried respiration, flushed countenance, eyes red and suffused with tears, profuse ptyalism, small but highly accelerated pulse, convulsive agitation and trembling, acute pain in the regions of the stomach and bladder, with such exquisite sensibility of these organs that the slightest pressure was instantly followed by general convulsions.

An hour previous to my arrival, the apothecary of the house had given the patient a scruple of the sulph. zinc. and he had subsequently taken ten grains of sulphate of copper, by the direction of a medical friend. As he had not yet vomited, and the symptoms continued to increase in violence, one drachm of ipecacuanha was administered; and, at the expiration of twenty minutes, he was bled to sixteen ounces from the arm. The operation was followed by faintness and free vomiting, and the convulsive action became for a while suspended. He was now ordered two ounces ol. ricini, and to accelerate its operation, frequent mucilaginous injections; and should these fail of producing free evacuations, the oil to be repeated in four hours. He was also directed to drink copiously of linseed tea, to have fomentations applied to the abdomen, and in case of a recurrence of the convulsions, a laudanum injection after the operation of the cathartic.

It was found necessary to repeat the oil in the course of the night, after which full dejections took place. Convulsions of the limbs occurred at intervals, and also long-continued and painful priapisms.

On the morning of the 8th, I found the patient in some degree relieved from the violent symptoms of the preceding evening. His mind was calm; there was but little febrile excitement, though his pulse was quicker and skin somewhat dryer than in health. He was still unable to bear the least pressure over the epigastric and pubic regions, and he had passed no urine.

He was directed to be cupped over the hypogastrium—to take of the following mixture. Sp. eth. nitric. ℥ss. sp. acet. ammon. ℥iv. M.—Half an ounce every two hours—*linseed and barley tea at* 4 *o'clock, P. M.—repeat the ol. ricini—fomentations—pediluvium.*

9th. 9 o'clock, A. M.—During the preceding day, he continued comfortable, full evacuations followed the use of the oil, and the spasms disappeared. In the evening, however, an exacerbation of the symptoms ensued; the pain about the bladder increased; priapism returned; and, before the next morning, wild delirium. At this hour he is composed, complains of tenderness over the bladder, particularly on pressure, but is calm and comparatively comfortable—pulse eighty in a minute, with slight increase of action—a thin white coat upon the tongue.—*Venesection, to* ℥viii.; *ol. ricini, at* 2 *o'clock, P. M.; fomentations to be continued through the day.*

10th. At 8 o'clock this morning I found him in a state of complete insensibility. About 7 o'clock, the evening before, the convulsions returned with appalling violence, and continued for two or three hours, when there was an interval of quiet and reason. At 2 o'clock, in the morning, after having complained for a short time of severe pain in the head, he sunk into a state of coma, in which he continued at the time I saw him.—*Semicupium; strong sinapisms to the back of the neck, feet, ankles, and legs; warm stimulating injections.*

At 11 o'clock, Dr. J. Stearns, my colleague at the House of Refuge, saw the patient with me in consultation; we now found him rational, and his symptoms much the same as yesterday morning, but he has yet passed no urine since the attack.

11*th.* At 10 o'clock, A. M. the condition of our patient apparently much improved; four hours after our last visit he had a copious evacuations from the bowels, and at the same time voided eight or ten ounces of high-coloured urine. In the course of the day he occasionally complained of pain in the head, and at times had slight delirium, but these symptoms subsided after repeating the sinapisms. He has passed no water since yesterday afternoon.—*Blister to the nape of the neck; sinapisms above the pubes; calomel, ten grains—to be followed by castor oil.*

The evacuations from the bowels, were from this period free and natural, and the healthy secretion of the urine was restored. The patient recovered rapidly, so that in one week he was able to return to his customary employment, and to eat, with a good appetite, of the usual diet of the house. He seemed to regret sincerely, the folly and rashness that had well nigh destroyed him; and from this time was obedient, faithful, and industrious, and apparently free from all symptoms of disease, until the 14th of April.

About 10 o'clock this day, whilst employed in whitewashing, he was suddenly seized with severe pain in the head, pain in the right side, chilliness, and trembling, and shortly afterwards with universal spasms. (He was from this time under the immediate direction of Dr. Stearns, who was in attendance at the refuge, and in the hospital, when Cummings was brought in.) He was immediately directed an emetico-cathartic, and during the reaction, which succeeded the attack, was bled largely.

By these means he appeared to be relieved of pain, and the spasms subsided, but he soon after sunk into a comatose state, and remained in it till the next morning.—*Fomentations; pediluvium; sinapisms to the thighs and feet; blister to the nape of the neck.*

15*th.* In addition to the above means he was this morning directed fifteen grains of calomel, and subsequently sulphat soda in sufficient quantity to promote free evacuations from the bowels. He was again for a few hours roused from lethargy, but at 1 o'clock P. M.

relapsed, and thus as the force of disease or the power of remedies predominated, was alternately comatose and rational till morning.

16*th.* Dr. Stearns and myself visited him at 10 o'clock A. M.—although he complained of dull pain in the head, and when suffered to remain long undisturbed, became somewhat lethargic, [still] there were no symptoms that were manifestly alarming. He spoke rationally and intelligibly, and his pulse, eyes, skin, and general appearance seemed to indicate a favourable crisis.

He was now put upon the use of small doses of calomel and Dover's powder as an alterative. At five o'clock of the same day he was again attacked with severe convulsions, which continued about four hours.

17*th.* Better—a slight return of spasms in the afternoon.

18*th.* His mouth and gums are affected by the calomel. From this time he appeared to be rapidly improving till the 20th, when he had so far recovered his strength as to sit up the whole day. The only unfavourable symptom observable at this time, was an unalterable conviction in his own mind that he should shortly die.

21*st.* At four o'clock P. M. he had a recurrence of terrible convulsions, which lasted about half an hour, then a lucid interval of four or five hours, and finally a state of entire insensibility, which continued till ten o'clock A. M. of the 22d, when he expired.

At four o'clock of the same day the body was opened, and by the assistance of Drs. WOOD, CHEESEMAN, and RODGERS the contents of the cranium, thorax, abdomen, and pelvis were examined with unusual particularity.

The only morbid appearances exhibited were the following:—The blood vessels of the brain were preturnaturally turged, especially those of the cerebellum, which was covered with a coat of coagulable lymph. About an ounce of serum was effused into the base of the skull. The mucous membrane of the stomach was whitish, or paler than natural, soft, pulpy, and very easily detached by rubbing it with the finger. Sanguineous congestion in the pelvis of the kidneys, exhibiting the usual appearances of inflammation in these parts. Ten ounces of urine were drawn from the bladder by a catheter.

The following queries are obviously suggested in the foregoing case. Was the disease and death of the patient produced solely by the cantharides? What connection was there between the first attack and the second? What was the immediate or proximate cause of the final disease? That the first attack was exclusively owing to the cantharides, I think there can be no reasonable doubt. Cummings was the first subject admitted into the refuge, and of course had been there more than two years. During the whole of this time he was in perfect health. It may be said that some symptoms were absent which usually characterize the action of cantharides, but the fact that there was an entire suppression of urine, and long-continued painful priapism, symptoms which this poison only would be likely to produce, is evidence, which viewed in connection with the circumstances of his taking it, shows conclusively that his disease was solely produced by that cause. In the course of the first sickness there was evidently great sympathetic irritation, if not an entire metastasis of disease, first between the stomach and urinary organs, and finally between these organs and the brain. This appeared not only from the symptoms alternately prominent, of the deranged functions of these several parts, but from the traces of inflammation discovered on dissection.* The violence thus sustained by these organs, left them strongly predisposed to a recurrence of diseased action, and the appearances on dissection not less than the symptoms which immediately preceded death, showed the brain to have suffered most severely in the first attack, and to have been the chief seat of disease in the last. Cummings had been constantly and laboriously engaged for four or five days before he last sickened, and was greatly fatigued the preceding day, which of itself was sufficient to excite disease in a vital organ already no doubt impaired by previous lesion.

I have said that Cummings had taken an *ounce* of tinct. of cantharides, but would now state more definitely, that he was seen to drink the medicine from a small-sized ounce vial, which he filled with the tincture, and took from the medicine case that morning. The fact that he obtained it from the vessel containing cantharides, was confirmed by examining a small portion remaining in the vial. Now then, if in this case, sickness and death were caused by an ounce at most of this medicine, how shall we reconcile it with the statement of a late writer, that, (in cases of impotence,) he has administered it in several instances, in doses of one or two ounces, two or three times a day; and that, on one occasion, a patient under his charge, labouring under extreme mental anguish, took six ounces of tinct. of cantharides during the night, without the least mischief arising.* It is acknowledged that sometimes in the last stage of fevers of peculiar malignity, and also in some diseases of the stomach itself, this organ becomes so torpid that all medicines cease to have any effect; but it is not pretended that any such peculiarity existed in the cases above mentioned, for the writer labours to prove the general error of administering the cantharides in too small doses, and the entire safety of adopting his example in ordinary practice; and this is my apology for introducing the subject in this place. So many cases are on record, where death ensued from a much smaller quantity than is here prescribed as an ordinary dose, that it is fairly inferred that the preparation administered in the above cases was inert, and that the practice is an unsafe precedent in the use of the remedy.

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* It was not till after I had made the above memorandum of post mortem appearances that I saw a review of M. Andral's work on "Chronic Gastritis," in which *paleness and softness* of the gastric mucous membrane, *unattended by redness*, are particularly pointed out as characteristic marks of inflammation. These phenomena were strikingly exhibited in the case under consideration, and are strongly confirmatory of Andral's statement. He says, "looking to etiology, we shall find the greater number of agents in the production of these softenings, belong to the class of irritants. Poisons introduced into the stomach of animals produced the appearances in question." Again he remarks, "in young, plethoric, and irritable persons, endued with great nervous sensibility, a very small softness of the stomach will produce a great general reaction in the system, followed by intense fever, delirium, convulsions, disturbance of all the functions and sudden death."—*Medico-Chirurgical Review, Vol. X. p.* 150, *American Edition.*

During the illness of Cummings, Dr. G. Emerson, of Philadelphia, then on a visit to this city, saw the patient with me. On his return home, he had the kindness to send me the subjoined case, which he transcribed from the note book of the late Dr. S. P. Griffitts. It is an additional illustration of the action of cantharides as a poison, and as is justly remarked by Dr. Emerson, "the value of the case is greatly enhanced from the high degree of fidelity and candour which marked the character of the narrator."

"7 mo. 29th, 1804. Called to see ———, —— years of age, who three hours before had swallowed a tea-spoonful of powdered cantharides by mistake. Ten minutes after she threw up a small quantity of phlegm. An hour after took fifteen grains of P. Ipecac. and plenty of warm water, and threw up the contents of the stomach with the cantharides. Took a large dose of castor oil, which puked and purged. Her pulse now low, with great retching—burning in the stomach—sore tongue—strangury. Was bled fourteen ounces. Mustard cataplasm to the stomach. Took ten drops of tinct. thebaic. with spt. nit. dulc. every hour. At bed time one grain of opium and warm bath. Rested well. Next day heavy—sickness less—strangury diminished. Said she felt the urine passing from the kidneys to the bladder; where, when it arrived, it occasioned a sensible burning. Drank very often, chiefly milk, and molasses and water. Little vomiting—great costiveness, though enemata of sal. Glaub. had been given. Semicupium which produced great sweat. Bled again at night. Strength decreased, and she sunk under the weakness."

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* Facts and Inferences chiefly relating to Medical Jurisprudence, &c. by John W. Francis, M. D. &c. Vide New York Medical and Physical Journal, Vol. 2, p. 28.

REVIEWS.

Art. XV. *De la Non-existence du Virus Vénérien, prouvée par le raisonnement, l'observation et l'expérience; avec un Traité Théorique et Pratique des maux Vénériens, rédigé d'après les principes de la Nouvelle Doctrine Médicale.* Par L. F. R. A. Richond Des Brus, Du Puy, (Haute-Loire,) Docteur en Médecine de la Faculté de Paris, Ex-Chirurgien aide-major a l'Hopital Militaire de Strasbourg, Associé Correspondant de la Société Royale de Médecine de Bourdeaux, de celles de Toulouse, Metz, Strasbourg, et Correspondant de la Société des Sciences, Arts et Agriculture d'Agen. A Paris, 1826. Vols. II. 8vo. pp. 883.

THE first quarter of the nineteenth century, will stand conspicuous in the annals of medicine, for great changes in the pathology and treatment of diseases. No subject has perhaps profited more by the revolution than that of venereal complaints, as no other was ever more obscured by errors, or tramelled by imposing dogmas. The authority of such names as Hunter, Bell, and Swediaur, had bowed down the profession to implicit faith and patient credulity. But these obstacles, ever in the way of improvement, are rapidly yielding to the successful efforts of enlightened individuals, whose reports regarded at first as heretical, have been subsequently viewed by the more ingenuous with complacency, and finally rewarded with a fair investigation. In this way firm believers in the specific and even chemical agency of mercury, as the only neutralizer and destroyer of the syphilitic poison, have come at length not only to a knowledge of its frequent inefficacy, but to a sense of the injury generally attendant upon its use, even when administered according to the most orthodox directions. Patients were found to survive, when mercurials were either dispensed with entirely or sparingly exhibited; nay, even to recover from local and constitutional ailments under other treatment. The old practice, founded upon the all-sufficiency of this agent over the poison, yielding to the force of these observations, the cure of lues, is now successfully conducted by many upon principles alike applicable to all diseases. In this country the number of those who have ventured thus far is yet comparatively small: but, counting upon the ordinary force of truth, and the ardour with which it is here sought after, we have no hesitation in declaring it as our firm belief, that in a very few years a total reformation will have been effected in this branch of medicine, to the almost entire exclusion of the old, esteemed, fundamental doctrines.

Nor can we feel much wonder at the tenacity with which the old opinions relative to venereal affections have been adhered to, when we consider the weight of the chief authorities that founded and sanctioned them. Some of these were true disciples of the Baconian school, regulating their course by no other landmarks than those established by nature, and ascertained by observation and experiment. For such men with such guides to fall short of the attainment of truth, shows the narrowness of the limits which circumscribe human genius, and whilst it warns us against too implicit faith in any names or authorities, should at the same time make us cautious even of our own conclusions and opinions.

The freedom of inquiry now spreading on every side, we hail as the power that is to redeem the followers of the healing art from much of the opprobrium they have been made to sustain, and must continue to bear, until their department acquires a greater degree of that exactness which gives stability to the other sciences. It is the obscurity and uncertainty hitherto involving medical subjects, which have given rise to such perpetual discord among physicians, and invited open scepticism and jests; allowed empiricism to make her bold encroachments, mock at the angry fulminations and unavailing attempts employed to put her down, and frequently to triumph from the superior confidence awarded to her perilous but often successful nostrums. And to the same causes is it owing, that the evidence of physicians, upon points connected with their profession, have so little weight in a court of justice. It is only the dawn of a better intelligence that can free medicine from this perplexing and degrading situation. We have, it is true, advanced so far as to be able to smile at the hermetic science of the Egyptians, and that absurd love of mystery, which led them to worship the Ibis, because the space between its legs when parted asunder as it walks, forms a complete equilateral triangle. But having cast off the slough of superstition, we have yet to free ourselves from the dominion exercised over us by others, and submit more entirely to the guidance of our own common sense and observation. Certain it is, however, that we have the most difficult allotment of science assigned us for cultivation, seeing that whilst others are concerned in tracing the forms and relations of material substances, and the reciprocal actions of inert matter; it is our task to acquire a knowledge of the phenomena of life and to ascertain the operation of the most subtile agents, upon principles only cognizable from their effects. But the greater the difficulty, the greater the glory of the achievment. HARVEY, the NEWTON of our science, has brought to light secrets hidden from the mind of man, for all we know, from his first creation, and the successful researches of BICHAT, in addition to what they have already accomplished, may yet develope operations in the animal economy, which have been consigned to the list of inscrutible first causes.

We must not, however, suffer our zeal for the general welfare of the science to lead us from the particular subject in which we are engaged.

The main points which M. Des Brus regards himself as having established in his treatise, are—1st. The non-existence of a specific venereal virus, said to have been originally carried from America to Europe; 2d. That venereal affections were known long before the period of the pretended importation; 3d. That the primary and secondary effects attributed to the specific poison, possess no distinctive characteristics and are not specific; 4th. That the manner in which the disease is introduced into the system, its seat, the causes of its reproduction and maintenance in defiance of the processes of assimilation and decomposition incessantly going on, are unknown, and have given rise to a multitude of ridiculous hypotheses; 5th. That the crowd of different remedies employed with advantage against syphilis, shows that its nature is not specific; 6th. That mercury does not always cure it, but sometimes aggravates and proves dangerous whilst it cures a great many diseases not venereal; 7th. That the non-mercurial treatment is favourable; 8th. That the development of the constitutional phenomena and even the existence of hereditary syphilis may be explained without reference to a virus; 9th. That these last may be cured without a specific; 10th. That all, in fine, which has been said of syphilis, complicated, disguised, etc. is altogether absurd. The reasoning, observation, and experience brought by our author in support of these various positions, will be presented in this article, so much of them, at least, as will serve to do justice to his arguments. But it may first be necessary to examine the pretensions of one who has made so bold an attempt, not simply to break through the limits prescribed by former authorities, but to overturn the whole foundation and superstructure upon which the doctrines and treatment of the disease had formerly rested, substituting others of an entirely new order.

M. Richond Des Brus, Doctor of Medicine, of the Faculty of Paris, and, as may be seen by referring to the heading of this article, member of various other medical and scientific associations, professes to have devoted himself almost exclusively to the consideration and treatment of venereal affections. Charged with the direction of this department of practice in the Military Hospital of Strasbourgh, he had there great facilities of observing them in all their varieties, of studying their causes, modes of development, characters, and peculiarities in different individuals and under different circumstances. He had likewise an ample opportunity of comparing the advantages obtained from the employment of the various modes of treatment. The simple assurance of his having collected with care eleven hundred cases, and treated nearly three thousand patients, is calculated to recommend the fruits of his observations to respectful attention.

On commencing the exercise of his profession, our author appears to have been completely tied down to the principles and practice then almost universally held by the profession. He confesses that he was too freshly imbued with the lessons of Professor Cullerier, to think of any thing else than putting his instructions into practice. All his patients, therefore, were submitted to the mercurial treatment, and, with very little variation, the exact rules laid down in the works of Swediaur and M. Lagneau, followed. If a soldier returned to his wards shortly after leaving them as cured, or presented an ulcer, bubo, or wart, which he pretended were not owing to a fresh infection, he immediately concluded either that the patient had eluded his vigilance, and neglected the mercurial course, or that sufficient mercury had not been administered for the destruction of the virus. At once, therefore, recourse was again had to the mercury, which was administered more freely than before.

> "I was often," says he, "surprised at the tenacity of the virus, which in some patients resisted three or four courses of mercury, but authorized by my classic authors, attacked it each time with the same arms under different forms. I smiled when a poor conscript ingenuously told me that he had never any symptoms of syphilis, but that the surgeon of his regiment had nevertheless assured him that the excrescences which developed themselves about the anus, during his journey, were venereal. Have you ever been with women, I demanded? If he replied in the affirmative, I then unhesitatingly told him that he had contracted syphilis, d'emblée,* whilst if the answer was to the contrary, I gave him to understand that he might have received it from his parents. On both suppositions I pronounced it equally the pox, and felt tempted to address him in the phraseology I had long been accustomed to hear every morning from one of my old professors, 'you are rotten to the marrow of your bones.' He was thereupon condemned without mercy to pass through the routine of grand re-

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* A term used to imply a reception of the virus into the system without any previous alteration or affection of the genital organs. By means of this ingenious invention the believers in a specific virus are enabled to slide over many difficulties, to their own satisfaction at least.—Reviewer.

medies. In merely doubtful cases, I always preferred submitting my patients to a treatment of *precaution*, to leaving them exposed to the long series of evils which I believed the virus capable of producing."

There are few even at this day who will not recognize most of the views, here presented by our author, as their own, either at the present, or some other period of their lives. With but few exceptions they were certainly the reigning doctrines when we first walked the wards of hospitals in pursuit of instruction. Our author's account of the difficulties that so frequently arose from a rigid adherence to the old views, and the manner in which he was led on by observation to the adoption of others, is both interesting and replete with instruction for those who may yet be travelling in the old road. He found himself like all other practitioners, if they would but confess it, very much embarrassed in distinguishing between ulcers which were venereal and such as were not.

"I knew," says he, "that many lazy soldiers, to get clear of active duty, were in the practice of forming ulcers upon the prepuce by means of caustics, for the cure of which they were immediately placed under my direction. On the other hand, I was aware, that other soldiers, to avoid the mercurial treatment which they dreaded, attributed the ulcers, that showed themselves after impure connexion, to chafing, masturbation, or hard drinking. It therefore became equally important to avoid error, and becoming the dupe of such patients. At first, I fancied, that by the aid of signs laid down by authors as pathognomonics of syphilis, I could readily distinguish between the different species of ulcers which I had to manage. But in this I was mistaken. It often happened that I met with many ulcers upon the same individual, each of which presented a different aspect, one being syphilitic, another having no such appearance. Resorting to mercury as the touch-stone, I have seen those disappear which I did not consider venereal, whilst others with the characteristics became aggravated. If I only employed local emollient baths, and mucilaginous drinks, I sometimes saw veritable chancres speedily disappear, and all the symptoms give way. In other cases I encountered all the marks of syphilitic ulcers strongly determined, admired and pointed them out to the students present at my visit, and have been told the next day that the sores were produced and kept up by the diurnal application of caustic. It was, after many similar observations, that I was induced to regard the various forms presented by ulcers, as the products of irritation diversified according to its intensity, duration, and seat, and to believe that the pretended symptoms of syphilis did not depend upon the action of a virus. In this manner was I convinced by my own observation, supported by the testimony of others, that ulcers of the glans, skin of the penis, and scrotum, have a different aspect from those of the prepuce, and that marks, such as callous edges, perpendicular cut, hardness at the base, &c. given as pathognomonics, rarely belong to these last."

Our author experienced further embarrassments from what he observed relative to the nature and characters of buboes, which he saw making their appearance after mild gonorrhœas, ulcers without the *specific aspect*, and after superficial excoriations occasioned by mechanical violence. In all these cases, he found them the same. Regarding their development as similar to that which ordinarily attends irritation of the lymphatic ganglions, he often treated them in accordance with this view by the application of leeches and emollient poultices, and in this way procured the resolution of such as he had believed decidedly venereal. Even when these suppurated, and their edges ulcerated and became callous, they were cured by a treatment adapted to simple irritation. These observations led our author to think that syphilis in its primary stages ought to be associated with the ordinary phlegmasiæ, and receive the same treatment. But as yet he had not doubted the existence of a virus, but only considered the inflammation it occasioned as not specific, although he believed in the necessity of destroying the morbid principle or cause by mercury. Subsequent experience, however, led him to observe the frequent inefficacy and often injurious effects of this universal remedy, and to doubt its infallibility. "I was," says he, "forced to the conclusion that mercury had no direct action upon the virus, and did not neutralize it."

Upon the faith of these observations he was finally led to treat constitutional syphilis occurring in soldiers of delicate and irritable habits, in whom the use of mercury occasioned numerous inconveniences, by such other means as he thought would be judicious if no specific cause existed, and instead of the result being merely palliative, he was surprised to find cures. He even ventured to discharge these patients without the exhibition of mercury, and found that their cure was complete.

> "What reflections," he observes, "did these new and unexpected observations lead me to! Can the cure be perfect, I inqured of myself? Will not the poison give rise to new accidents? But does this virus which occasions me so much embarrassment really exist? And am I not frightened by a phantom? It is true all authors admit it, but all the facts which I have gathered are opposed to the principles which proceed from its admission. And is their testimony of no value? Having once doubted, my imagination set to work, and I sought by every possible means to gain new lights. For this purpose I made fresh observations. I imagined that the virus did not exist, and endeavoured to account without it for the phenomena attending on syphilis. I treated patients without mercury, and read with a spirit of scrutiny and suspicion those authors whom I had until now believed to the letter. I examined the basis of their theory, traced their most accredited opinions back to their sources, and learned from these investigations that authors have successively copied from each other, admitted the existence of a venereal virus without sufficient proof, and that the whole prevailing theory rested upon a sandy foundation, susceptible of being swept away at pleasure."

We have been the more inclined to present the train of observations and inquiries which ultimately led our author to change his opinions, inasmuch as the account furnishes a history of the experience of many others who have been interested in similar investigations. It is hardly necessary for us to say that many of his tenets have long been advocated in this country, though as before stated, by comparatively few. We would not therefore have it supposed that we present them as new and unknown, although some of them will doubtless be recognized as such.* But these doctrines, though founded upon the firm basis of experience and reason, have hitherto been so generally sacrificed and forsaken for those of the old school, that they will, in the shape presented by our author, gain new force, and bear down obstructions too strong to be removed by former well-directed but less regular attacks.

Notwithstanding the entire change in his views, M. Des Brus was still for a while bound down to an observance of the old routine practice, being at the time of his conversion obliged to conform to the orders of a surgeon in chief. The appointment, however, of this superior to another station, left the field entirely open to Des Brus, and he was not long in seizing upon the advantage. Accordingly he put almost all his patients upon a treatment without mercury. Under the name of saccharine powder he administered pulverized sugar to them in the form of glosso-palatinal frictions, watching to see that they used it with sufficient confidence to tranquillize their minds, and believe the medicine indispensable for their cure. The results were most satisfactory. Primitive as well as secondary symptoms readily healed, and relapses were no more frequent than after the old method, inconveniences were rare, and the general health less impaired.

> "The reader," says he, "will judge of the importance of these results by the numerous facts which he will find in this work. Experience has sanctioned my method: let him try it, and he will be easily convinced of my veracity."

Of one thousand six hundred and fifty-five patients admitted by him into his wards from March, 1823, to August, 1824, three hundred and forty-two were subjected to the mercurial treatment, that he might be able to compare the effects of the two plans.

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* As early as the year 1808, Dr. Rousseau, of Philadelphia, published in the fourth volume of the Philadelphia Medical Museum, views relative to venereal affections closely allied to many which are brought forward by Des Brus. Dr. Rush, in his Comments upon Sydenham, has most happily anticipated the present era, by observing that he had no doubt the time would come, when syphilis, like all other diseases, would be treated according to general principles. Dr. Chapman's opinions relative to venereal affections have in many respects been for years in accordance with those of the new school. Dr. T. Harris, of the U. S. Navy, has shown himself a very able advocate of the rational plan of treating syphilitic affections.

We shall conclude this account of our author's introduction with a passage relative to the prejudice and opposition which those have to contend with, who dare to step aside from the old beaten track and strike out paths of their own.

> "In openly attacking," he observes, "a theory which four centuries of observation seem to have rendered unshaken, which has been sanctioned by the most illustrious men whose opinions have ever enjoyed popularity, I am sensible that I expose myself to the choler of the numerous partisans of morbid entities, vices, and a virus, and to be treated as a worthless blasphemer. For I know with Madame De Staël, that all opinions differing from the prevaling spirit, whatever this may be, offend the vulgar, and that human reason habituates itself to servitude even in the field of philosophy and the sciences. But what care I for the clamours of such persons; provided I succeed in gaining the attention of the industrious and impartial student, and cause some practitioners to doubt, my objects will be accomplished. It is doubtless very difficult to convince prejudiced men, and I cannot flatter myself with being able to effect alone the useful revolution which the state of the science demands; but other practitioners possessing more influence over public opinion will at length raise their voices to overthrow that theory which is a shameful monument of the credulity of our predecessors. I believe the moment favourable for calling the attention of physicians to this obscure point of medicine: minds are at present eager for truths, weary of hypotheses, and attach importance to nothing but well-attested facts."

The title to the first chapter of our author, "la syphilis n'est point une maladie nouvelle," lays open a highly interesting field for inquiry, but one which has of late years been so ably examined, as to leave little room for new research, or for doubting the position of our author. Was the point once decided in the affirmative, that there really exists no specific venereal virus, it would render attempts to establish the position entirely superfluous; and, were there no other reasons of sufficient weight to disprove the American origin of this malady, the lights of history alone would afford ample demonstration. In the discussion of this matter we are sure that our opinions rest perfectly free from the influence of national prejudice. We do not feel that the honour of the western hemisphere is at all at stake in the decision, and could the American origin of this very unseemly disease be clearly substantiated, the only reflection we should perhaps be tempted to make in reference to the subject, might be, that the new world was not altogether exempt from that alloy of evil which a wise Providence has every where else blended with his choicest favours.

As however we cannot expect that our own conviction will be unreservedly admitted by others holding a different faith, or whose minds have never been completely set at rest upon the question, we shall proceed to state the most conclusive evidence which our author has brought to bear upon the question.

Previously however, we beg leave to refer to a few of the leading speculations of former days, to show that such existed, and were doubtless held in equal veneration with those of later date. Thus in 1519, Coradin Gilini pretended that as a consequence of the conjunction of Mars and Jupiter, on the 16th of January, 1496, in a warm and humid sign, there arose vapours from the earth and water, which, inflamed and put into action by Mars, corrupted and changed the air, and engendered those bad humours which occasioned the disease. But the greater number of the believers in astrology were disposed to lay the blame upon the eclipses of the sun and moon. Some, who perhaps entertained less faith in the influence of the planets, started the singular opinion that the true source of the poison was to be found in the wine casks of Somma, a village near Mount Vesuvius. The Spaniards, they say, compelled to retire from this place, added to the wine they abandoned, all the blood which they could draw from the sick in the hospital of St. Lazarus, a sophistication which rendered the liquor poisonous, so that it communicated disease to those who succeeded them. This fable is however eclipsed by another, maintained by one Leonardo Fioraventi, who had the facts from no less an authority than the son of a butcher to the army of Alphonso, king of Arragon, which prince, as is well known, carried on a long war against the duke of Anjou. In this state of things the provisions on each side becoming at length exhausted, the suttlers of the two armies, impelled by the desire of gain, had recourse to supplies of human flesh; from the eating of which the disease in question originated. In corroboration of this opinion, the author asserts, that he had made many experiments upon dogs as well as pigs, the result of which was, that animals nourished upon food of their own kind, have their bodies covered with pustules, lose their hair, and perish miserably. These last observations were subsequently confirmed by other authorities, and, with the preceding, amply suffice to show the darkness which then overshadowed the medical art, and the ineffectual groping of its followers. Under these circumstances, it is no way surprising that when Schmauss, a professor in the school of Salzbourg, in 1518, started the new idea that the disease was brought from America, upon the ground that this country alone produced guaiacum, then regarded as the specific provided by nature for its cure, he should have gained so many adherents, since the wild theories, then in vogue, could only have been entertained for want of better. Its plausibility, at least, is amply attested by the fact, that it has kept its ground very generally ever since, and even now has its numerous and firm advocates.

The opinion of SCHMAUSS, as established for the most part by the influence of GIRTANNER and ASTRUC, sets forth that syphilis was unknown in Europe until introduced by the followers of Columbus, who had received it in their intercourse with the savage women of the New World. That many of those who had contracted the disease either in America or Spain, joining the army of Gonzalvo, took the virus with them into Italy and communicated it to the prostitutes of Calabria and Naples, by whom it was transmitted to the French army, after which it soon spread over the rest of Italy, to France and other parts of Europe.

Let us examine how this general belief is sustained by historical testimony. On the 4th of March, 1493, Columbus debarked from his first voyage, at Val-de-Parayso, near Lisbon. After spending nine days in the Portuguese Capitol, he set out for Seville, where he arrived on the 15th of the same month. From thence he went to Barcelona, and arrived there about the middle of April. Now it is distinctly recorded that the Spanish army under Gonzalvo, did not arrive in Italy until the month of May, 1495, before which time we have the clearest accounts of syphilis being in Rome, namely, in 1493, as recorded by INFESSURA and other Italian writers of that period. It is, therefore, impossible that the troops of Gonzalvo should have been the first to carry it into Calabria, and, as we think, totally incredible that in the course of three months after the arrival of Columbus and his followers, (the number of which, originally only one hundred and twenty, had been reduced by the establishment of a colony of thirty men on the island of St. Domingo, and other causes,) it should have been spread by them to Berlin, Hallé, Brunswick, Meclenburgh, Lombardy, Auvergne, and other countries, where it is demonstrated to have existed, by the accounts of ZORELLA, ALEXANDER BENOIT, CAPREOLI, FULGOSI, SABELLICO, and others.

For proofs that the various forms of syphilis were known to the ancients, M. Des Brus refers to the work of Professor GRUNER, which contains a crowd of passages relative to the subject, extracted from the Greek, Latin, and Arabian writers. He also thinks that an attentive perusal of the books of HIPPOCRATES, *De natura muliebri*, *De morbis mulierum*, and others, will lead to a conviction that the descriptions there given of ulcers and other affections of the genital parts, suppurations of the inguinal glands, etc. correspond perfectly with the symptoms now styled venereal. In support of this disputed point, we shall cite but few, of many authorities, as quite sufficient for its establishment. The first is Celsus, who in his sixth book and eighteenth chapter, describes, with an accuracy leaving no room for doubt, the most ordinary effects, both primary and secondary, arising from impure sexual intercourse, among which are phymosis and paraphymosis, attended with discharge and ulcers, the last being particularly mentioned as situated on the interior surface of the prepuce, on the glans, and penis itself. The same prescriptions which he advises for the treatment of some of these affections, he likewise speaks of as applicable to the ordinary secondary symptoms affecting the tonsils and palate, together with ulcerations of the mouth and nose. "Eadem autem compositio tonsillis, uvæ madenti, oris nariumque ulceribus accommodata est." The whole chapter is replete with evidence in favour of our position.

The second reference we shall make is to the Bible, where, in addition to the attestations furnished in other parts and frequently quoted, we would call the attention to a comparison instituted by the psalmist between spiritual and bodily infirmities, in the following expressions.

> "There is no soundness in my flesh because of thine anger; neither is there any rest in my bones because of my sin. For my iniquities have gone over my head: as an heavy burthen, they are too heavy for me. My wounds stink and are corrupt because of my foolishness. I am troubled; I am bowed down greatly; I go mourning all the day long. For my loins are filled with a loathsome disease; and there is no soundness in my flesh. I am feeble and sore broken: I have roared by reason of the disquietness of my heart. My heart panteth, my strength faileth me: as for the light of mine eyes, it also is gone from me. My lovers and my friends stand aloof from my sore; and my kinsmen stand afar off."*

If there be no allusion in this passage to that "loathsome disease of the loins," of which we are treating, we must confess ourselves greatly at a loss to conjecture, what other bodily disorder, proceeding from "sin and foolishness," and thus situated, could have been intended.

Of the writers of comparatively modern times, who have treated most unequivocally of venereal affections, we shall cite but two or three, as quite sufficient for our purpose.

Rhodius, in his notes to Scribonius Largus, mentions the death of a prince of Padua, in 1355, in consequence of an inveterate disease contracted in the privy parts from excessive intercourse with women.

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* Psalms, xxxviii. v. 3, 4, 5, 6, 7, 8, 10, 11. Other passages bearing upon the same point may be found in Leviticus, chapters xiii. xv. xx, and Numbers, chap. v.

Salicet, a surgeon who lived in 1270, devotes a whole chapter to pustules and other corruptions which manifest themselves upon the penis and around the prepuce, arising from intercourse with public women.

Gardonnius, who lived in 1303, treats clearly of diseases arising from impure sexual connexion. In a chapter entitled *De apostemate in inguinibus*, he says, that the affection called bubo of the groin, is occasioned either by a cold disease thrown from the liver towards parts which are weak and empty, or by a warm influence, as when a man happens to have his penis corrupted from intercourse with an uncleanly woman.

With respect to the true source of syphilitic complaints, no one, we think, who examines the subject with candour, and the help of the lights recently shed upon it by able investigators, will be able to believe that the title so long vested in America as the original fountain, can be maintained with the slightest plausibility. The assertion of the celebrated Astruc, that "syphilis is never engendered in Europe, neither by bad regimen, nor by any abuses of nature, but is kept up by foreign leaven, which perpetuates or rather renews itself continually," we consider as baseless and erroneous in the extreme. Well-attested instances of the spontaneous production of the various forms of syphilis, are in fact so extremely numerous as to make one hesitate which to cite first. Not a few have fallen under our immediate observation, and we have consequently long been a firm believer in their spontaneous origin, from too active excitement of the genital organs, or other causes with which we may not be acquainted. Venereal affections are doubtless coeval with the vice of promiscuous and excessive venery, and may be regarded as an effect of that undeviating law of nature, by which evil consequences are made the invariable attendants upon excesses. Could it indeed be reasonably supposed, that a female should have frequent intercourse with several men, and experience no inconvenience from thus committing violence upon nature, and interfering with her most important function. A different result might certainly be expected. Organs so admirably formed and exquisitely endowed, could not escape injury from mechanical violence with other causes of excitement. A high degree of irritation and even inflammation must necessarily ensue, and the secretions from the parts be changed into foul and acrimonious discharges, rendered perhaps still more so from intermixture with the most acrid of animal secretions. Who will deny that these consequences, with all the train of ulceration, etc. cannot take place without the necessity of the American leaven. Even before disease has manifested itself by any external appearances, the over-excited genital organs may impart to their secretions virulent properties, capable of producing active disease, when applied to a very sensitive and irritable surface on another person. There is, in our opinion, no security against venereal contagion, where either of the parties is addicted to frequent promiscuous intercourse. Appearances of health, under these circumstances, are never to be trusted.

But why has the last of the fifteenth century been so generally fixed upon as a period when syphilis made its first appearance in Europe? The following reasons we think may be given in answer to the question. It would appear from various accounts written at the time, that exanthematous diseases prevailed extensively, and particularly in the southern parts of Europe. As the most authentic records represent the age as one of extreme licentiousness, it is natural to infer that venereal affections were very prevalent, and that eruptions usually attendant upon them may have been often confounded with cutaneous diseases arising from other causes. The term syphilis, the derivation of which is quite uncertain, was no doubt applied in the times to which we allude, to designate epidemic exanthematous affections, though since confined to those morbid symptoms arising from impure sexual intercourse. It is our opinion that new diseases much less rarely occur, than that old ones are lost sight of, or cease to be clearly recognized, either from changes in the nomenclature of our predecessors, or the obscurity of the terms and imperfect descriptions they have left us. Upon these suppositions only can we satisfactorily explain the accounts we have of syphilis prevailing as an epidemic, and acquiring successively the popular designations of Neapolitan, French, and Spanish disease.

We will conclude our remarks upon this part of M. Des Brus's treatise, by observing that the proofs of the existence of all the forms of syphilis prior to the discovery of America, are sufficient to overwhelm all the arguments to the contrary ever brought forward by Schmauss, Girtanner, Astruc, and all their adherents. Those who feel curious to inquire more into the subject, we would particularly refer to the work of M. Des Brus, and also to the able "Historical and Critical Observations on Syphilis," by Jourdan, a translation of which into English, may be found in the third volume of the Philadelphia Journal of the Medical and Physical Sciences.

We have now arrived at a subject much dwelt upon by M. Des Brus, and one for which we anticipate much greater opposition, than any other topic connected with these investigations—namely, *the non-existence of the venereal virus.*

The existence of such a matter or substance as that called the venereal virus, has until very lately been so firmly and universally believed, that persons venturing to doubt it ran more risk of being denounced as visionary and sceptical, than of attracting any respectful attention to their opinions. When it is considered that the actual being and presence of a specific poison, constitutes the basis of all former pathology and practice in syphilis, it may be readily conceived that the consequences of the contest are of the highest importance, as the establishment of the new doctrine would be like erasing from a tablet the useless records it contained.

But lest it might be inquired what we mean by the term *specific virus,* we will anticipate the question by answering, a morbid secretion, which applied to the animal system, produces a peculiar action, similar to that by which it was generated, manifested by a regular and uniform train of symptoms. As examples we refer to the secretions in the well known diseases variola, vaccina, and psora.

Let us see what success is likely to follow the reasoning, observation and experience which may be advanced to disprove the existence of that morbific matter asserted to have been first introduced into the old world from America, and which has been characterized by various writers as an inflammatory, acrimonious, corrosive, acid, alkaline, glutinous, sulphurous, and even electrical substance.

The first argument advanced by M. Des Brus in favour of his opinion is founded upon a position laid down by Cicero in his second philippic, namely, "that nothing is less worthy of a reasonable man than to oppose against one with whom he may have a dispute, an opinion which the other has only to deny in order to stop short all opposition in his opponent, and to show that it ought to be rejected, seeing that it only reposes upon a fable destitute of all proof." Upon the strength of this classic logic, M. Des Brus calls upon the believers in a virus to demonstrate its existence, and to say what it is, and where it is.

The *contagion* of venereal affections affords, perhaps, the strongest proof in favour of the existence of a specific venereal virus. But it must be observed, that the form communicated is not, as has been strenuously maintained, always of the same character with the original affection, individuals contracting their diseases from the same source, often presenting the most different trains of symptoms. As well, M. Des Brus thinks, may it be argued that the coryza attending inflammation of the mucous membrane of the nasal cavities, depends upon a specific virus, because the secretion applied to the same membrane of healthy persons, will, as he asserts, excite a similar affection. The same results follow the application of a morbid secretion from any other mucous surface when applied to one in a sound state. That of the eye in purulent ophthalmia is adduced as a familiar illustration. In these cases it is manifest that the secretory organs are deranged and their discharges altered, and that they acquire from inflammation qualities sufficiently acrimonious to produce an irritation in the parts to which they are or may be applied. Why, it may be asked, may not the same thing take place in venereal irritations.

M. Des Brus cites very many interesting cases to prove that the syphilitic affections propagated to several sound persons who may have had connexion, about the same time, with the same infected person, unlike what might be expected from the direct application of a specific poison very often differ greatly from each other. Of the truth of this our own observation has furnished the most ample evidences. Appealing, however, to the examples cited by him, we shall at the same time present his rationale as illustrating very clearly the views he takes of the subject.

> "Six friends," says he, quoting from Vigaroux, "after a hearty repast, had connexion with the same girl, who communicated the pox to them all. The disease, however, manifested itself among them with different symptoms. Two of them had chancres and buboes; two others, gonorrhœa; the fifth had a chancre; and the sixth a single bubo. One of those who had chancres and buboes was soon cured by a regular treatment with frictions: the other with the same affection, had his bubo to suppurate, the skin to separate, become spongy and perforated. He became dejected, salivation took place; the submaxillary glands became engorged; the discharge from the chancre ichorous; he lost his strength, and sunk. He who had only a chancre, burnt it out, and experienced no inconvenience after marriage, his children proving healthy. Of the two who had gonorrhœa, one experienced it in its mildest form, whilst in the other, on the contrary, it was attended with exceeding virulence, and resisted the efforts made to cure it, for ten months."

In relation to this case, M. Des Brus observes—

> "In vain may we seek to account satisfactorily for these different phenomena, otherwise than by referring to the different excitability of the several patients, and to the various degrees of inflammation occasioned by the connexion. This affords the only rationale, which will apply equally well to them all, whatever may have been the irritating principle which produced the disorder. Let us suppose that these six individuals had been exposed to the contact of certain vegetable juices, alkalies, acids, corrupted animal matters, etc. The effects produced we should account for thus:—With two of the persons alluded to, the irritation occasioned by the excitant predominating upon the

extremity of the mucous coat of the urethra, would cause this to inflame, and it being the property of inflammations of the mucous surface, to give rise to a mucous discharge in greater or less abundance the affection we call gonorrhœa would have been produced. One of these patients presenting a greater excitability of this part than the other, or the inflammation having manifested itself with more violence, the result was a difference in the intensity and duration of the disease. With two others, either from greater sensibility of the glans, or the more intimate application of the irritating fluid to this part, ulcers were produced upon it; the irritation propagated along the lymphatic vessels to the inguinal glands, gave rise to a bubo, in the same manner that we see swellings of the sub-maxillary glands occasioned by salivation. In the first the symptoms were perhaps dissipated by the mercurial treatment producing upon the excretory organs and lymphatic system in general, a true revulsion to them of the irritation seated upon the genital organs. With the other, either because the glandular inflammation was too profound, or that it had been aggravated by the stimulus of the mercury, suppuration took place, the cellular sub-cutaneous tissue was destroyed, and the skin left without support, sunk down—a prey to disorganizing inflammation, it wasted away, becoming thin and perforated. On the other hand, irritation of the salivary organs was produced by the mercury, the mouth became tumid, as well as the sub-maxillary glands. The gastric viscera participated in the excitement as happens on ordinary occasions. Hence loss of strength, ichorous suppuration, dejection, and finally death. With the sixth, the excitement of the penis not sufficient to establish an ulcer, was nevertheless capable of exciting sympathy in the inguinal glands, which, predisposed to irritation, swelled in the same manner that they are seen to do after a prolonged march."

Should the believers in the specific virus attempt to explain the varied effects observed in the cases just related, by ascribing them to the different dispositions of the individuals, we would reply, such indeed *may have been* the case, but why resort to obscure hypothesis, to explain what may be satisfactorily understood without.

But how can we resist the positive proofs of a virus furnished in the experiments of Mr. Hunter, who, by inoculating with venereal matter, produced that disease in sound persons. Those who will take the trouble of examining the records of these experiments with attention, will not, we think, feel bound to believe in the existence of a specific venereal virus. All the results observed will admit of the easy mode of explanation which has already been applied so satisfactorily by M. Des Brus, to the solution of other cases. Many experiments of inoculating with venereal matter, similar to those of Mr. Hunter, have been made in France, by MM. DUBLED, BERTIN, DUPAU, DES BRUS, and others, which show that the matter of gonorrhœa and chancres rarely produce any lasting effects, when applied and even inserted into other tissues, except those with which they usually come in contact during the act of coition. Venereal pus, it is true, *may* become the cause of an ulcerative inflammation, but under these circumstances the phenomenon is *purely local*, and like other inflammations, may give rise, either through sympathy, or continuity of tissue, to various changes in the neighbouring or distant organs.

It would appear that the believers in a virus have in France, lately availed themselves of the unhappy results of an experiment by inoculation, for the support of their position, which, like certain religious appeals, are calculated to take stronger hold on the prejudices and feelings, than on the reason. This circumstance we shall relate in the words of M. Des Brus, giving at the same time his comments.

"In opposition to my reported experience, there will doubtless be cited the results, obtained by three young physicians who inoculated themselves, which have been pompously announced in the medical journals. Each of the three, it is said, made a puncture in the arm with the point of a lancet, charged with syphilitic matter. In one, swelling of the axillary glands took place, which, treated by antiphlogistics alone, went on to suppuration, and produced considerable injury of the axilla. In the second, the puncture inflamed and ulcerated; a chancre presenting *all the venereal characteristics*, established itself, and made extensive ravages. But admire how far the love of the marvellous will carry us: it is pretended that this young man, after consulting a professor of the medical school, who told him that the ulcer was *venereal*, and that he must resort to mercury, went into the hospital and opened the crural artery!!

"What, this young physician, who, inflamed by the laudable desire of throwing light upon an obscure point of science, had not scrupled to try upon himself an experiment reputed dangerous, and who had been led by observation to question the evidences of a venereal virus, to lose both reflection and courage so as to be driven to commit suicide; merely too because a professor had told him he had the pox! And what great matter was there even if it had been so? Could he not have resorted to mercury for its removal, if, confiding only in the edicts of the professor, he was not able to rid himself of the idea that the employment of that medicine was absolutely necessary? Or, was he determined by shame or vexation not to survive a defeat? The supposition cannot be admitted, for what did the ulcer with which he was affected prove? Nothing more than that the pus applied had acted as an irritant. Now it is not probable, that before submitting to the inoculation, he could have been ignorant of the circumstance, that inflammation often gives to the fluids secreted on parts where it is seated, acrimonious and irritating properties: that accidents often occur from scratches made by instruments impregnated with the sanious humours of a wound or dead body: and he ought to have been familiar with many facts similar to the following, reported by M. Bégin. Opening, with M. Broussais, the body of a man who had died of gastro-enteritis, accompanied with adynamic symptoms, M. Bégin experienced an insupportable sensation of burning, in consequence of having touched the intestinal contents, and had likewise a considerable swelling of the hand, as well as an abscess upon one of his fingers, although neither he nor M. Broussais, *who experienced similar inconveniences*, had been wounded by the knife. Every thing, therefore, conspires to render it likely, that the subject of this experiment was driven to suicide by other causes."

The case of the third young man is reported to have presented *divers positive symptoms of a venereal infection.*

"It is greatly to be regretted," says M. Des Brus, "that these young men have offered no conclusions upon their observations and experience. Their testimony would then have had more weight, and might have served to confirm or disprove the conclusions which it has been attempted to draw from them."

M. Des Brus thinks that the symptoms exhibited in these three experiments, do not at all establish the existence of a virus. That, in the axillary engorgement of the first, there was nothing extraordinary. Among other circumstances referred to, in order to explain the phenomena, he cites some of interest from his own personal experience. On one occasion, having received, whilst opening a dropsical subject, a slight cut upon one of his fingers, pain in the arm soon ensued, together with violent inflammation, and swelling of the glands in the axilla, which were subdued by leeches and other appropriate means. These symptoms were attended with an acute gastro-enteritis, produced from the ganglionic irritation, referred to the mucous coat of the intestinal canal, succeeded by a pustular cutaneous eruption on the trunk of the body, so that it was only necessary that he should have been inoculated with venereal matter, to have constituted a case of syphilis. All this and more is adduced, to prove that the axillary engorgement in the young experimenter, did not proceed from the introduction of a specific virus.

The ulcer which manifested itself on the second, was nothing uncommon, since a splinter, or the acrid juice of any vegetable might have produced the same effects. As to the characters of syphilis, M. Des Brus demands what else they are than the ordinary products of irritation. So much, therefore, for the evidences of a virus furnished by inoculation.

It has been our own lot to witness many instances, in which symptoms have occurred from other causes, not to be discriminated from those ensuing to venereal affections taken in the usual way. Of these we will take the liberty of mentioning one, the case of a widow lady of cachectic habit, who was suddenly attacked with an alarming sloughing ulcer just above the heel of the right foot. After the loss of considerable substance, the ulcer healed under the use of generous diet and tonics. About two weeks afterwards, however, a swelling took place in one of the right inguinal glands, which proceeded rapidly to suppuration, and on being opened, discharged most abundantly a thick pus. This soon got well under the treatment previously prescribed.

About a week or ten days after the removal of the inguinal affection, she was attacked with severe colick, accompanied with spasms, and strong indications of a disordered condition of the digestive organs, soon after recovery from which, she went into the country, staid about three weeks, and returned apparently in better health than she had enjoyed for a long time. In a few days, however, she complained of soreness about the bridge of the nose, where there existed a considerable redness. A wash of lead water and laudanum was directed externally, and internally the decoction of sarsaparilla, along with colomba. A plain nutricious diet was enjoined. The soreness was relieved and the redness disappeared in the course of three or four days, and we now thought every thing right again. In about three weeks, however, we were called upon by the same lady to witness a papular eruption on the hands and arms, which, however, soon disappeared, and proved the finale. We regard this case as illustrating most happily the chain of connexion subsisting between the various tissues and organs of the body, and the manner in which impressions are transmitted from one to another. In a cachectic state of the system, produced most probably by a derangement of the digestive organs, the heel became the focus of morbid irritation, probably first set in motion there by some injury too slight to be noticed. From thence it was propagated successively to other parts, according to laws regulating the phenomena of diseases. Had we not witnessed the primary affection, and our patient been in any degree susceptible of a suspicion of venereal indulgence, (which was altogether impossible,) no human power, we believe could at that time have convinced us, that the venereal virus was not at the bottom of the case. Here then we have the usual consecutive phenomena attendant on venereal affections, without the presence of a specific venereal virus.

All who have possessed opportunities of paying much attention to venereal affections, must have frequently witnessed the transition of the inflammation and irritation attending upon simple gonorrhœa to the glandular system producing soreness in the lymphatics of the penis; swelling of the inguinal glands, testicles, etc. rheumatic affections of the muscular and membranous tissues, irritation of the mucous membrane of the fauces and other parts, cutaneous affections, etc. in fact, all the symptoms commonly observed to follow venereal sores. Now, if it can be demonstrated that a similar train of symptoms may be produced by other means, and entirely without the agency of venereal matter, it results that there is no necessity for the agency of a specific virus, in order to explain the rationale of syphilitic affections. We have seen a simple warty excrescence which existed on the prepuce for several weeks as the only evidence of an impure connexion, converted by the injudicious application of caustics and other means used for its removal, into a foul and irritable ulcer, deep, livid, surrounded by callous edges, and withal exceedingly obstinate to heal, giving rise subsequently to a tedious and inveterate train of constitutional symptoms. And yet such warts under ordinary circumstances are readily removed by simple applications, and seldom or never, according to our experience, occasion any other than mechanical inconvenience, unless some such violence as that above described, has been applied to the tissue. We have therefore no hesitation in believing that under such circumstances it is not a virus which does the mischief, but irritation and inflammation roused and determined in its natural direction, a doctrine which we think applicable alike to all manner of venereal affections.

M. Swediaur, the firm champion of a specific venereal virus, has reported a most admirable experiment performed upon his own person, which we think should have taught him different views from those he maintains in his work upon syphilis. By injecting a strong solution of sal. ammoniac a very little way into his urethra, he produced thus artificially a most virulent gonorrhœa, attended with a purulent discharge, ardor urina, nocturnal erections, chordee, irritable bladder, and all the usual concomitants. He was six weeks in performing a cure. The case, which is detailed at considerable length in his book, is well worth referring to.

Should we be asked whether we think M. Swediaur, with this artificial affection, was capable of communicating disease to a female by having connexion with her, we would unhesitatingly answer, yes; just as effectually as if he had originally derived it from venereal intercourse.

We find in books the most prolix descriptions of the various sores observed to proceed from impure coition. The nicest distinctions have from time to time been drawn between the genuine syphilitic and the spurious, and ingenious classifications founded upon their *sui generis* characteristics. An immense deal of talent and industry have been thrown away upon such fabrications. What has been styled the true primary syphilitic ulcer has been delineated with great accuracy by the genius of HUNTER. And yet a late writer, Mr. CARMICHAEL, who has admitted the distinction made by Mr. H. implicitly, with the most ample opportunities afforded him as chief of a large hospital dedicated to venereal complaints, has not been able with all his observation to find more than two or three legitimate Hunterian chancres in many years. It is therefore useless to comment upon the inutility of such a distinction, particularly since it has been demonstrated over and over, that this kind of ulcer, contrary to the positive assertions of Hunter, Carmichael, and many others of great authority, can, like every other venereal sore, be cured without mercury.*

Upon the whole, the pretended characteristics of venereal affections which have served to edify the credulous faithful, and confuse the student and candid inquirer after facts, may be readily demonstrated to be nothing more than the ordinary effects of irritation and inflammation, modified by circumstances now well understood.

> "The ulcer of the teguments of the penis, whatever may have been its origin, seldom bears any resemblance to that of the glans. That of the glans differs ordinarily from that of the prepuce, whilst those of that envelope frequently exhibit great variety of appearance, even at the same time, and in the same patient."

All this variation may be referred to the different degrees of intensity of the irritation or inflammation, and the length of time the ulcers may have existed. Their physiognomy is susceptible of great and rapid variation. These are points to which M. Des Brus has invited particular attention, and which he says will be ever confirmed by close observation of the phenomenon which succeed each other during the development of the ulcers. The original and progressive appearances of these primary affections are thus described by him:—

> "They ordinarily proceed," says he, "either from a slight excoriation produced during coitus, from small white or reddish serous vesicles of the size of a millet seed or pin-head, and of an aphthous appearance, or from a minute pustule on the skin. These vesicles break, the fluid which they contain escapes, and sometimes we find the denuded surface exactly like that produced by the application of a blister, whilst at others it is of a milky white. The inflammation progressing, the sore becomes larger and deeper, extends more or less to other parts, and soon presents an aspect varied by circumstances. Sometimes the edges are thin, pale, and level with the surrounding parts; at others, on the contrary, they are hard, engorged, and elevated above the sore, particularly after the inflammation has lasted for some time: sometimes the centre appears red and granulated, or pale, fungous, and raised above the margins: sometimes excavated, and of a yellowish colour. In some cases a corrosive matter is secreted. The surface is at times perfectly even, or striated, ragged, and of a stellated appearance. Round or oval upon the prepuce, they are generally irregular upon the glans, elongated upon the frænum, round

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* Notwithstanding, however, the distinctions and classifications adopted by Mr. Carmichael in his treatise upon venereal diseases, the practice which he inculcates, is upon the whole more consonant to reason and the results of recent investigations, than that laid down in any other English book with which we are acquainted.

or oval upon the skin. The irregularity in form generally augments with the progress they make."

After remaining a certain time, the ulcer generally produces a hardness of the part upon which it is situated. This hardness is sometimes like cartilage, and—

> "I have often," says he, "seen the base of the prepuce forming a kind of firm and solid ring around the glans. The number of sores varies infinitely: sometimes there is only one, and then again a great many. The chancre of the genital organs is occasionally observed healing on one part, and at the same time attacking another, under every treatment that may be resorted to."

In fact, it cannot we think be denied, that all the appearances designated as the pathognomonics of primary syphilis have occurred, and may occur without the application of a specific virus. Neither is it to be doubted that those have greatly deceived themselves who have drawn such nice distinctions relative to the infallible characteristics, some of whom have even gone so far as to pronounce their dogmatical opinions upon the bare evidence of the odour exhaled by the pus. The truth is, many practitioners have themselves been the authors of the pathognomonic symptoms, which they have wrongfully charged upon the visionary existence of a *specific virus*, the most simple and harmless sores, having been converted by means of improper washes, ointments, escharotics, general treatment, &c. applied according to a certain routine, into irritable, obstinate, frightful, and most mischievous ulcers, which have not only committed ravages upon the tissues where they were first located, but brought other tissues successively into disorder until finally the whole system has been invaded.

The evidence of a venereal virus drawn from the occurrence of buboes, however strong it may seem at first blush, is altogether without weight when candidly investigated. Their presence in fact proves nothing more than that the irritation has extended from the tissues of the penis, either from continuity or sympathy, to the tissue of a neighbouring gland. They originate from similar causes in other parts of the body, most commonly in the axilla from some affection of the superior extremity or breast. The diagnostics, designating this affection as of a *genuine* syphilitic character, as it is termed, are equally fallacious with those applied for the same purpose to chancre. The labours of Astruc and all his followers in this work, when investigated with attention and candour, will be found vain and delusive.

Like attempts have been made to fix the characteristics of genuine syphilitic gonorrhœa, so that it may be distinguished from the spurious kinds often said to be mistaken for it. But notwithstanding the great ingenuity displayed in the task, every unprejudiced person who will make the investigation for himself, will come to the conclusion that all the phenomena of gonorrhœa depend upon different degrees of urethral inflammation.

"Thus," says M. Des Brus, "in regard to inflammations of all other parts, we constantly observe a difference in the intensity of the pains, in the derangement of the functions, and in the colour and qualities of the excretions."

It is precisely the same case with gonorrhœa, which originating from similar causes and sources with the other forms of syphilis is, like them a genuine phlegmasia, curable upon the same general principles. Existing usually without any solution of continuity in the diseased tissue, it frequently gets well of itself, and seldom, comparatively speaking, affects the other tissues of the body to any considerable extent, unless when aggravated by peculiar circumstances. Then indeed its effects are transferred to other parts, and it runs its course after the manner of other venereal forms, attacking the testicles, inguinal glands, the mucous membranes of other parts, the muscles, fasciæ, skin, &c. Who that has frequently been called upon to treat gonorrhœa, has not witnessed sudden transition of the irritation from the urethra to distant parts, the ligaments and joints for example, where it has raged with a violence demanding the use of the most powerful antiphlogistics. In such cases the morbid phenomena scarcely perceptible in the original seat, have as speedily returned to it again whilst the affection of the other parts has ceased. Now, who will contend that the virus in these cases has been translated in the space of a few hours, first to distant parts possessing a very obscure and white circulation, and again in as short a time retreated to its primitive situation.

Such, however, is the force with which early impressions and associations are stamped upon the mind, that it is long before we begin to doubt, and still longer before we come to disbelieve in the existence of things and circumstances relative to which we have formed and long entertained distinct conceptions. It is just so with regard to the venereal virus. All who acknowledge its existence, and the number who do not hold with the hypothesis we are persuaded is at present extremely limited in this country, doubtless think that they have a clear idea and perfect knowledge of what it is. But should any of these set out with candour and something like mathematical scrutiny, in search of the object of their belief, we are greatly mistaken if they would not meet with more difficulty than they might imagine, in demonstrating to the external senses, any substance or matter produced by venereal affections, so distinct in its nature and properties from ordinary animal secretions, as to deserve the appellation of *specific virus*, or bear a fair comparison with what are universally recognized as such, namely, those of small-pox and vaccination.

We propose, on another occasion, to continue our exposition of the subjects of M. Des Brus's treatise, promising to dwell more particularly upon those parts of it relating immediately to the practice founded upon the new doctrine. E.

ART. XVI. *An Essay on the Ultimate Principles of Chemistry, Natural Philosophy, and Physiology, deduced from the Distribution of Matter into two Classes or Kinds, and from other Sources.* By LARDNER VANUXEM.—Part I. Octavo, 91 pp.—Philadelphia, 1827.—Carey, Lea and Carey.

THE theories presented by Professor VANUXEM in this essay, are founded, as the title announces, upon a distribution of matter into two distinct classes; and this distribution is proposed in the commencement of the work, with such an air of novelty, that an incautious reader might be led to suppose that it possessed some originality. This, however, is not the case; the proposed distinction being already adopted by all writers on chemistry. The two kinds of matter alluded to, are called by THOMSON, confinable and unconfinable; by DAVY, ponderable and etherial; and by our author, concreting and non-concreting.

The general properties of these two classes are stated in the following extract:—

> "As the one class of particles is known by its tendency to form concretions, or bodies, whose parts cohere together, and are tangible, we have attraction, or gravitation, as its inherent principle, or attribute: and as the other class of particles, on the contrary, exhibit no concretions, nothing tangible, we must conclude that repulsion, the antagonist power to gravitation or attraction, is the inherent principle, or attribute of the non-concreting class. It is in virtue of these two opposing principles or attributes, by which each class of particles is, as it were, held in equipoise or neutralization, when the two kinds of particles act upon each other, that the peculiar attributes belonging to each kind of particles, are enabled to come into action; from whence result all the phenomena which constitute the physical world."

In all this there is certainly nothing new; nothing but what is already familiar to every student of chemistry. But in considering caloric as a cause of repulsion between the particles of ponderable matter, our author conceives that chemists have committed a gross mistake, which he states and confutes as follows:—

> "It is asserted by writers on chemistry and natural philosophy, that caloric, meaning thereby caloric of temperature, is the sole cause of the expansion of bodies, (common matter,) and as a consequence, bodies without caloric must be solid. Assuming these premises, it follows, that as the atmosphere diminishes in temperature as we recede from the surface of the earth, (upwards,) there must be a point at which no caloric exists: consequently the matter of the atmosphere there must be of great density; if not absolutely in the solid state. The absurdity of this conclusion is evident, from all our positive knowledge of the atmosphere; the truth, (incontestible,) being that its rarity increases with its height, and its density in the inverse degree. The conclusion in question is therefore a paradox, and clearly shows that from these principles we know nothing of the real cause of the expansion of gaseous bodies."

We freely acknowledge the justice of this conclusion, but we must be permitted to declare, that we have never met with any writer on chemistry or natural philosophy, who asserts that caloric of temperature is the sole cause of the expansion of bodies. On the contrary, every author, from the time of BLACK, has considered *latent* heat as the cause of the fluid and gaseous state, and the very explanation which is given by our author of the atmospherical paradox, may be found in an article on caloric, in Dr. URE's dictionary, which he quotes in another part of his book.

In a paragraph immediately following that which we have just quoted, our author observes a curious coincidence which he erects into a general law, and which it is proper that we should notice. It is that the latent heats of water at 32°, and of steam at 212°, are directly proportional to their respective temperatures. In fact, supposing the first to be 140°, and the second 927°, we have 32 : 140 : : 212 : 927, very nearly. We have called this a curious coincidence, and it is not the less so perhaps from the circumstance of its being purely accidental. As the scales of our thermometers have no reference to a natural zero, it is evident that the ratio of the numerical temperatures which they mark is not that of the real temperatures. If we suppose the zero of Fahrenheit to be placed 100° below its present station, the freezing and boiling points of water would be 132° and 312°, and the above proportion would be changed into the following:—132 : 140 : : 312 : 331; but, according to the author's hypothesis, the last term should still be 927. If we use the Centigrade or Reaumur's scale, the first term of our proportion will be zero, and consequently the last infinite; a conclusion palpably absurd.

It is not our wish to find fault, but we meet with a theory on the next page, to which we cannot give even the sanction of our silence.

"That sensible heat, or caloric, increases as the density of the atmosphere increases, follows of course, and may explain the rise of temperature, when descending into the interior of the earth, when below the point of no variation. This explanation was first given by Dr. Cooper. (Vide Silliman's Journal, vol. iv. p. 243.) A consequence of some importance in the theory of the atmosphere, of the sun, and of comets, follows from the increase of the temperature of the atmosphere with its density. Gay Lussac found, that atmospheric air, when condensed so as to occupy about one-fifth of its volume, became luminous; so that any globe, whose atmosphere is equal to the density of the air in the experiment mentioned, will be permanently luminous; the degree of light increasing as the density of the atmosphere increased."

It seems to us, that these theories are founded upon a misapprehension of the facts. That sensible heat is evolved when air is condensed, and absorbed when it is rarefied, is undoubtedly true; but it is certainly no less true, that these states of temperature are not permanent. In a short time, the rarefied air, under the receiver of an air-pump, acquires the temperature of the surrounding atmosphere; and air under strong compression, very soon parts with its excess of heat, and loses its light immediately. Now it is evident, that if this be the case, the theories which we have quoted, must necessarily fall to the ground.

The author of the essay next proceeds to consider his non-concreting matter, in that state in which it is uncombined or free, and to which, "for want of a better term," he gives the name of "astronomic, gravitating, radiating, or planetary." He supposes the earth to be surrounded by an atmosphere of this etherial matter, subjected, like the air, to the force of gravity, and, of course, having its particles "increased in number and proximity to each other, in proportion to their proximity to the earth." From this "ample store of quiescent repulsive matter," he supposes the caloric and light to be derived, which are, "as it were, called into existence," by friction, by chemical combination, by the explosion of gunpowder, &c. Our readers will judge, in the first place, how far this view of the subject can be considered as new; and, in the second place, how far it affords a specific explanation of phenomena, which have long continued to embarrass the most ingenious philosophers.

The next subject discussed in the essay, which we think it important to notice, is presented in the following extract.

"It has long been demonstrated that attraction is as the weight of common matter: now repulsion, or the antagonist force of attraction, as has already been shown, being inherent to ethereal matter, its action or force must be in the ratio of the levity of common matter. This being the case, it follows that those particles of common matter which are heaviest, will have the least attraction, for example, (using caloric to represent the class,) for caloric; as affinity is counteracted by gravity or the concreting power, so on the contrary, those particles of matter which are lightest, attraction of gravitation or the concreting force being less, will have the greatest affinity for caloric; or, in other words, the two forces acting upon each other, the action of the non-concreting attribute will be greatest, where the concreting attribute is feeblest, and feeblest, where the concreting attribute is greatest; or, using the language of chemistry, the capacity for caloric will diminish, as the weight of the atom increases, and increase as the weight of the atom decreases.

"This law, which follows from the action of the two classes upon each other, giving it its simplest expression, namely, *the forces being in inverse ratios to each other,* is fully confirmed by experiment; and it is to MM. Dulong and Petit, that we owe the important facts, whose consequences, it appears, were overlooked, or lost, in a conclusion as singular as it was erroneous. These gentlemen made a number of experiments with different metals, for the purpose of ascertaining their specific heats; and to use the language of Dr. Ure, (Dictionary of Chemistry, article caloric,) 'their result has disclosed a beautiful and unforeseen relation, between the specific heats and primitive combining ratios, or atoms of the metals; namely, *that the atoms of all simple bodies have exactly the same capacity for heat.* Hence the specific heat of a simple substance, multiplied into the weight of its atom or prime equivalent, ought to give always the same product.'

"In examining the table of Dulong and Petit, I found that no conclusion like the one given could be deduced: that the *relation* stated, arose from confounding the product of the specific heat and weight of atoms, with the capacity of the atoms for heat. Whereas, the true and self-evident result of the experiments in questions, is one not only of great beauty, but of the greatest importance in science, and confirmatory of the action of the two classes upon each other, as has already been mentioned. The conclusion being *that the capacity of atoms for heat increases in the ratio of their levity,* and decreases in the ratio of their density, and it is to this cause solely *that their product is a constant number.*"

Here we are obliged, once more, to differ from our author, and to acknowledge our accordance with the "singular and erroneous conclusion" of MM. Dulong and Petit. It must be observed, that the specific heats found by these experimenters, correspond to equal weights of the substances compared. Thus the specific heat of a pound, (for example,) of water being 1, that of a pound of lead is .0293, and that of a pound of sulphur is .1880. If now, we wish to compare the specific heats of two pounds of lead, and three of sulphur, we must multiply the corresponding tabular numbers by 2 and 3 respectively, and the proportion sought will be that of the products .0586 and .5640. In like manner, if there be two masses of the same substances, of which the weights are in the ratio of 12.95 to 2.011, their specific heats will be in the ratio of .0293 × 12.95, to .188 × 2.011, or of .3794 to .3781, that is, they will be sensibly equal. Now the numbers 12.95 and 2.011, are the atomic weights of lead and of sulphur, and this example may serve to illustrate the law established by Dulong and Petit. Indeed, it must be evident that the specific heat of an atom must be directly proportional to the specific heat of any mass composed of such atoms, and inversely proportional to the number of atoms in that mass. But the greater the atomic weight of any body, the fewer elementary particles will it contain. So that, finally, the specific heat of the atom will be directly proportional to that of the mass, and also to the atomic weight, and will therefore be measured by the product of these two quantities.

It is proper to remark in this place, that the extraordinary coincidence ~~mentioned~~ above, has been proved only in certain solid bodies, and that the deductions drawn from it by our author, and by Dr. Ure, even if correct, are far more general than the experiments warrant. This is fully shown by the following table, including three simple gases, examined by MM. Berard and Delaroche, and the simple liquid mercury, examined by MM. Dulong and Petit.

	Specific heat, that of water being 1.	Weight of atom.	Product, or Specific heat of atom.
Oxygen	.2361	1.000	.2361
Hydrogen,	3.2936	.125	.4116
Nitrogen,	.2754	1.75	.4819
Mercury,	.033	18.	.594

According to the theory, these products ought to be equal to .3753, (the mean specific heat of the atoms of solid matter,) and to one another, which is far from being the case.

Upon the hypothesis of our author, which we have thus considered, and which we think we have proved to be without foundation, are built nearly all the remaining speculations of his essay. It is explained at large, presented in every point of view, illustrated by diagrams, and finally applied to the explanation of the laws of chemical action, and of the phenomena of electricity, light, magnetism, and *life.*

From the task of pursuing a false theory into all its recesses, we must ask to be excused. It would be both unprofitable and unpleasant. The fundamental principles of an essay, coming from a most respectable source, and looked for with high expectations, it was our duty, as reviewers, to lay before our readers, and to discuss with freedom. This we have now done, and here our task must end.

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BIBLIOGRAPHICAL NOTICES.

1. *Reports of Medical Cases, selected with a view of illustrating the symptoms and cure of Diseases, by a reference to Morbid Anatomy.* By Richard Bright, M. D., F. R. S. &c. Lecturer on the Practice of Medicine, and one of the physicians to Guy's Hospital. London, 1827. 4to. pp. 231, with sixteen coloured plates.

This splendid volume, the commencement of a work to be continued on the same plan, contains reports of cases treated at Guy's Hospital, London, with beautiful, and for the most part very accurate representations of the morbid conditions found to exist in certain organs in particular diseases. There is no necessity, at the present day, of pointing out the immense advantages, which a large and well regulated hospital affords for studying diseases, or the value of clinical reports; they are sufficiently estimated; we shall, therefore, without preamble, give a sketch of the plan of the present volume, and notice those opinions that appear to be original with its author, and such of his observations as we think will be most interesting to our readers.

The first twenty-four cases are intended to illustrate some of the morbid appearances in the kidneys, observable in those who die from dropsical effusions. Dr. Bright asserts that he "has never yet examined the body of a patient dying with dropsy attended with coagulable urine, in whom some obvious derangement was not discovered in the kidneys;" and on the contrary, where the dropsy has depended on organic change in the liver, even in the most aggravated state of such change, no diseased structure has generally been discovered in the kidneys, and the urine has not coagulated by heat. Dr. B. conjectures the existence of three varieties of organic derangements of the kidneys, in dropsy, all generally attended with a decidedly albuminous character of the urine. In the first, the kidney looses its usual firmness, becomes of a yellow, mottled appearance externally; and when a section is made, nearly the same yellow colour, slightly tinged with gray, is seen to pervade the whole of the cortical part, and the tubular portions are of a lighter colour than natural. The size of the kidney is not materially altered, nor is there any obvious morbid deposit to be discovered. This state of the organ is sometimes connected with a cachectic condition of body, attended with chronic disease, where no dropsical effusion has taken place either in the cellular membrane, or in the cavities of the body. When this disease of the kidneys has gone to its utmost, it has appeared to terminate by producing a more decided alteration in the structure; some portions becoming consolidated, so as to admit of very partial circulation; in which state the surface has assumed a somewhat tuberculated appearance, the gentle projections of which were paler than the rest, and scarcely received any of the injection which was thrown into the arteries.

In the *second* variety, the whole cortical part of the kidney is converted into a granulated texture, and there appears to be a copious, morbid, interstitial deposit of an opaque white substance. This in its earliest stage produces externally, when the tunic is taken off, only an increase of the natural, fine, mottled appearance given by the healthy structure of the kidney; or under particular circumstances, gives the appearance of fine grains of sand sprinkled more abundantly on some parts than others. On making a longitudinal section, a slight appearance of the same kind is discovered internally, and the kidney is generally rather deficient in its natural firmness. After the disease has continued for some time, the deposited matter becomes more abundant, and is seen in innumerable specks of no definite form, thickly strewed on the surface; and on cutting into the kidneys these specks are found distributed in a more or less regular manner throughout the whole cortical substance, no longer presenting a doubtful appearance, but most manifest to the eye without any preparation; and other cases less advanced requiring maceration in simple spring water for a few days to render them more obvious. When this disease has gone on for a considerable time, the granulated texture begins to show itself externally, in frequent, slight, uneven projections on the surface of the kidney; so that the morbid state is readily perceived even before the tunic is removed. The kidney is generally rather larger than natural; sometimes it is increased very much, but at other times it is little above the natural dimensions.

The *third* variety, the kidney is quite rough and scabrous externally to the touch, and rises in numerous projections, not much exceeding a pin's head, yellow, red, and purplish. The form of the kidney is often inclined to be lobulated, the feel is hard, and on making an incision the texture is found approaching to semi-cartilaginous firmness, giving great resistance to the knife. The tubular portions are observed to be drawn near to the surface of the kidney: it appears in short like a contraction of every part of the organ, with less interstitial deposit than in the last variety.

Five plates of diseased kidneys are given, representing the varieties above described.

Besides these three forms, passing almost into each other, and usually attended with decidedly coagulable urine, Dr. B. says that there are two other deranged conditions of the kidneys in which coagulation is sometimes observable, but in a very subordinate degree, and often though observable one day is quite lost on another. One of these morbid states consists in a preternatural softness of the organ; the other in the blocking up of the tubercular structure by small portions of a white deposit, bearing the appearance of small concretions. In the former a corresponding loss of firmness has been observed in the structure of the liver, and the spleen and the parietes of the heart, the action of which organ had been observed during life to be deficient in force. In the other cases, besides the obstructed state of the uriniferous tubes, the whole structure of the kidney has been somewhat deranged, the cortical portion firmer than natural, and the tubular part has lost the regular convergency of the vessels, so that they have assumed a waved direction.

The object of Dr. B. in the foregoing statements, is to establish the fact, that certain dropsical affections depend more on the derangement of the kidneys themselves, than has been generally supposed; and that the albuminous nature of the urine frequently points out the particular cases, in which these organs are the seat of disease.

Dr. B. does not offer any thing satisfactory in relation to the treatment of these diseases of the kidneys; he doubts whether it be possible, after a decided organic change has taken place in this organ to effect a cure, or even to give any great relief, but where the mischief is less rooted, much may be done. In the early stages, before organic changes have taken place, two indications are to be fulfilled.—1st. To restore the healthy action of the kidney. 2d. To guard against dangerous secondary consequences, consisting in inflammatory affections, more particularly of the serous, sometimes of the mucous membranes, and in the effusion of blood or serum into the brain. These may destroy the patient at any period of the disease. The treatment therefore must have reference to these impending dangers, and hence in the early stages it will generally be indispensably necessary to have recourse to active depletion, even as a preventive measure; but it is still more necessary, at every stage of the disease, to combat the first symptoms of inflammation, or of cerebral congestion by the free abstraction of blood. A state of great congestion or process of slow inflammation exists in various internal organs, and particularly the kidneys, which produces subsequently their disorganization, bleeding is a most important remedy to restore the healthy condition of these organs.

Purgatives Dr. B. says generally act well, (the elaterium appears to be a favourite with him;) all the saline laxatives which unite a certain degree of diuretic power, are decidedly useful, of these he considers the supertartrateof potash as the most efficacious, and the best mode of exhibiting it when the stomach will admit, is by directing the patient to take a large draught of a mixture containing more of the salt than the water will dissolve, the first thing in the morning: in some cases he trusts entirely to this remedy. "When the stomach will not bear this mode of administering purgatives, the combination of jalap, supertartrate of potash, and a little ginger, repeated from time to time, answers well, or even frequent doses of castor oil have been very useful."

The diuretic remedy most frequently used by Dr. B. is the squill in its different forms: "but it has always acted best when given in combination with hyoscyamus, or when a grain of opium has been prescribed once or twice a day." Digitalis is in some instances cautiously administered.

Dr. B. considers the propriety of employing mercury as one of the most important questions in the treatment of this class of affections. "It is," says he, "consistent with the most successful treatment of many forms of inflammatory disease, that we should have recourse to the valuable combination of calomel and opium; and it is consistent with what is generally deemed good practice, that by the cautious use of mercury we should endeavour to produce more healthy action, and to promote absorption when there is reason to believe that disease has left any chronic morbid action tending to produce unhealthy deposit in glandular structures. Still, however, the cases which have proved most successful in my own practice, have generally been those in which I have rigidly abstained from the use of mercury. In some cases I have seen the good effects of other remedies entirely interrupted by the mercurial action, and I have likewise seen several instances in which the cure, when mercurials have formed part of the plan, has been protracted to a great length; and a great many in which the full action of mercury has not prevented the regular progress of the disease, and its fatal termination. Yet I have undoubtedly seen well-marked cases of this disease with decidedly coagulable urine, when taken early, in which the free use of mercury to complete ptyalism has not prevented the patients from deriving great, perhaps even perfect relief, from the remedies with which it was combined—these remedies having been bleeding, purging, and diuretics. Independently of the very great doubt which exists as to the advantage to be derived from mercury, there is one circumstance which most materially limits our power of employing it, and that is the violence and rapidity with which the ptyalism often comes on, and the great difficulty which is frequently experienced in restraining its effects: for when the cellular membrane is in the peculiar state of anasarca, induced by this disease, the gums and cheeks are not capable of supporting the process of ulceration, and often pass into a state of gangrene."

The cases and observations on the diseased conditions of the kidney in dropsy are followed by observations on the chemical properties of the urine in these cases, by Dr. Bostock. We cannot conclude our notice of this portion of the work without remarking that we have been led to believe from an attentive perusal of the cases, that if the patients had been treated by depletion more actively and perseveringly employed, and their kidneys less goaded to increased action by elaterium and the stimulating diuretics, that the morbid state of these organs which Dr. B. has described would have less frequently been found.

The next seven cases, (twenty-five to thirty-one, inclusive,) are given to illustrate some of the morbid appearances observable after death when dropsical effusion has been connected with disease of the liver. The morbid states of the liver found in these cases, were a morbid deposit around or in the secreting portion of that organ, which, without interfering very much with its natural consistence, rendered its surface rough, and its whole texture deranged and granular. A change of structure both in the secreting part and the connecting cellular tissue, so that the whole viscus was brought to an unusual state of firmness—the assini enlarged, and the parenchymatous substance thickened, and brought to a state of semi-cartilaginous hardness: when this state advances further, the cellular tissue forms bands in various directions, not unlike a scirrhous degeneration, either in appearance or consistence. In one case in which this state of the liver existed in a much earlier stage, a total change had taken place in its glandular appearance, so that when cut into, it bore more the appearance of a muscular body cut transversely to the direction of its fibres. In one case there were none of those cartilaginous bands of hardened cellular tissue, but the whole organ was changed into globular concretions, harder and more tough than in the natural condition, easily picked out of the cavities in which they seemed imbedded, and sliding pretty readily over each other, so as to render the whole pliable, though tough. Two plates, containing six figures, are devoted to representations of the morbid conditions of the liver above described. These alterations from a healthy state Dr. B. thinks, "produce very general obstruction to the circulation through the branches of the vena portæ, and become in this way the immediate cause of dropsical effusion, independently of any morbid condition which may result to the blood, by its not giving off those substances from which it is purified, while the process of secreting bile is carried to its full extent."

Cases thirty-six to thirty-nine inclusive, illustrate some of the appearances observable where disease connected with the viscera of the thorax has been followed by dropsical effusion. The morbid appearances observed in the cases in the thorax, were disease of the semilunar valves, obstruction of the aorta by a bony mass, ossification of the mitral valve, consolidation of the lung, adhesion of the pericardium to the heart, and disease of the internal membrane of the heart, &c.

Cases forty to fifty, inclusive, illustrate some of the varieties which take place in the results of inflammation attacking different textures of the lungs. Five of these are cases of inflammation of the mucous membrane of the lungs, (bronchitis;) and eight of inflammation of the substance of the lung, two terminating in suppuration, and the remainder in gangrene.

Two plates representing diseased lung are given, one exhibiting gangrene of that organ, the other abscess.

Cases fifty-three to sixty-seven, are illustrative of some of the morbid appearances discovered in phthisis pulmonalis. These are chiefly disorganization of the lungs, ulceration of the larynx, obstruction of the absorbent glands, more particularly those of the bronchial passages, and of the mesentery, and irritation or ulceration of the mucous membrane of the intestines. Four plates are appropriated to representations of these morbid derangements, two contain delineations of the morbid states of the lungs, and the other two, of morbid derangements found in the intestines.

Two cases, sixty-eight and sixty-nine, are given to show the influence of ipecacuanha, and the milder preparations of mercury in dysentery, one of these cases we have transfered to our periscope.

The next nine cases, (cases seventy to seventy-nine inclusive,) are offered to illustrate the morbid appearances which occasionally take place in the intestines during the progress of fever; and the succeeding eleven cases, which conclude the volume, are illustrative of the treatment to be employed when the mucous membrane of the intestines, is diseased, in fever.

Whatever may be the primary nature of the febrile attack, Dr. B. thinks, there can be no doubt, that early in the disease, "the intestinal canal is irritated, and that this irritation keeps up all the bad symptoms, becomes the chief object to which the practitioner should turn his attention, and is not unfrequently at last the immediate cause of death."

When patients are admitted into the hospital, which is seldom within the first week after the attack, Dr. B. says that the stomach and intestinal canal have become greatly deranged, tenderness is experienced at the pit of the stomach, and there are discharged daily five or six watery dejections, which present an appearance similar to that which would be produced by throwing a powdery matter, of the colour of ochre, into turbid water, and the powder settled to the bottom.

To correct these discharges, which depend on an inflammatory state of the bowels, he has found the combination of the hydrargyrum cum creta, the ipecacuanha, and the compound chalk power in different proportions the most applicable remedy, and in many cases he scarcely used any other combination throughout the disease. Under this simple treatment, with the mildest nourishment, the stools gradually change their character, the febrile symptoms regularly retire; and a state of complete convalescence succeeds to the most threatening symptoms.

When the tenderness of the abdomen is considerable, leeches, or, if the sensibility of the part does not absolutely prohibit the use of cupping-glasses, the abstraction of ten or twelve ounces of blood, in that way, sometimes affords remarkable relief, more particularly if succeeded by the application of fomentations. "The most alarming symptom," says Dr. B. "is the irritable state of the stomach accompanied by frequent vomiting, when a quantity of green fluid is usually thrown up either spontaneously or whenever the attempt is made to administer nourishment or medicine. In this case it becomes absolutely necessary to allay the irritation of the stomach; as not only are we prevented from administering the necessary remedies and support, but the patient is completely worn out by the continuance of the painful and exhausting efforts. The task which we are here called upon to perform is often of the greatest difficulty: leeches and cupping at the pit of the stomach sometimes gives very marked relief, even when the powers of the system appear much diminished; and sometimes a mustard poultice has proved beneficial, or a blister after the leeches have ceased to bleed. We may likewise have recourse to draughts, with the subcarbonate of magnesia and a few drops of the vinum opii, or a simple effervescing saline draught. Opium in the solid form, with or without calomel, occasionally assists much in allaying the sickness; but often, when every thing has failed, soda water with a small quantity, not exceeding a tea-spoonful, of brandy, repeated at long intervals, has remained on the stomach, and enabled it to receive and retain other things after various means have failed."

The symptoms of cerebral affection are to be relieved by cold applications, if there be no great deficiency in the general heat of the body, the hair being first removed, and by leeches or cupping where the symptoms are more urgent.

From examining those who have died at the hospital, Dr. B. does not hesitate to say "that the mucous membrane lining the ilium, the cæcum, and the commencement of the colon, has been the chief source of that excessive irritation which has been so prominent with regard to the bowels, and that the upper part of the duodenum has probably been the source of the urgent gastric symptoms; and occasionally the whole mucous membrane of the small intestines has been vascular and irritated. How far all this mischief may be referred to a morbid action of the liver, as affording a vitiated, a redundant, or an insufficient supply of bile, I will not take upon me to say: but the liver has not presented any marked evidence of irritation: it has occasionally been rather pallid, and the bile in the gall-bladder more thin and watery than in perfect health; but where this has been observed, it has fairly been a matter of doubt whether we ought to consider it the result or the cause of the intestinal irritation."

In fevers accompanied by inflammation of the mucous membrane of the intestine, the bowels are occasionally relaxed from the beginning, but more frequently the contrary is the case, and then Dr. B. considers it to be of the highest importance to remove any accumulations which have taken place, and prevent them in future, and for this purpose he recommends calomel, followed by castor oil, or combined with rhubarb, and their repetition directed according to the nature and extent of the evacuations.

"As long," says he, "as the dejections are feculent and not too watery, and as long as they pass without pain, we shall never be doing harm by our purgatives. On the contrary, the moment that any thing like watery diarrhœa comes on, either after purging has produced irritation, or when, from want of proper purging, the contents of the bowels have given rise to it, we must always bear in mind that the mucous membrane is getting into the state referred to in the preceding observations, after which every thing like brisk or irritating purging must be avoided. The moment the yellow ochry diarrhœa has taken place, I think there can be little doubt that the intestines are either actually ulcerated or are on the very point of ulceration; and then in general the irritation of the canal is of itself sufficient to prevent accumulations; and it must be our great and constant object to improve the secretion of the intestines and the connected viscera rather than to purge actively. We must not, however, for a moment entertain a project of putting a stop to the diarrhœa: we must watch it carefully and constantly; and if we have any reason to doubt the sufficiency of the discharge, we must act gently by means of castor oil guarded by a few drops of laudanum, or by simple emollient glysters. But in general this, which I conceive to be the period when ulceration is commencing, is the time, when the combination of the mildest mercurials, the hydrargyrum cum creta, and the compound chalk powder, with or without ipecacuanha, is administered with the greatest benefit; and it is advantageously continued till the cure is complete. In the following cases it will be found that I have often trusted the progress of the fever so much to the regulation of the bowels by these simple means, that I have appeared to forget the primary disease in my attention to this particular train of symptoms; and in truth I have almost done so, because I have very frequently found the cure of the disease keep exact pace with the improvement taking place in the alimentary canal. This combination generally of itself acts as a purgative; and if it does not, a simple gruel injection seldom fails to produce sufficient effect. During the whole period, however, that our attention is turned to the secretion of the mucous membrane, we are not to forget the possibility of vascular fulness, or even of inflammation being set up in some part of the abdomen, and to overcome this, when we have decided reason to believe in its existence, we are to employ external fomentations, leeches, and even cupping: but these remedies, admirably suited as they often are to this form of disease, must be used with caution; for I am persuaded that I have seen mischief result from an inclination to believe that every painful affection of the abdomen, more particularly if increased by pressure, in the advanced stages of fever, must necessarily be inflammation, and call for abstraction of blood."

Dr. B. has found antimonials do harm where there was any decided tendency to irritation in the bowels, and he usually substitutes the ipecacuanha wine, as a diaphoretic; but he thinks that "in many cases, harm rather than good is done by the use of saline remedies and diaphoretics in any form, as they irritate the bowels without materially aiding in that more equable distribution of the blood which is the professed object of their employment."

Tonic remedies Dr. B. considers as of essential importance; and that even while evidence exists of much local mischief in the bowels, it will sometimes be necessary both to support and to stimulate the system: "looking indeed," says Dr. B. "to the character of the ulcerations, the deep sloughs which they often form, and the dark red inflammation which surrounds them, there would be reason to suppose that such remedies might be useful. And occasionally the decided remittent form which the fever has assumed, has completely removed every scruple, and led to the free exhibition of the sulphate of quinine with admirable effect. At the same time there is more danger to be feared from the too early use of stimulants, as long as the system is still able, without their aid, to support the febrile prostration, than there is risk in abstaining from stimulants a little beyond the period when they might possibly begin to act well. In a general way the system seems capable of supporting itself for a few days under that great degree of prostration which is connected with advanced ulceration of the bowels; and although we cannot determine the exact state of the ulcers in these cases, yet we find that the action of stimulant and tonic remedies is often more certainly beneficial after that state of prostration has existed for some time, than when such remedies are administered with a view of obviating or anticipating the first symptoms of collapse; for when administered too soon, they frequently kindle the inflammatory action with redoubled violence, and then it is that the most appalling combination of debility and nervous excitement is seen for one or two days to precede death."

Dr. B. concludes his observations on fever, with the remark that though it is perhaps not within the power of human skill always to arrest those awful scenes with which fever frequently terminates, *there is undoubtedly no more certain way of interposing to prevent them than by making ourselves acquainted with the nature of the mischief with which we have to contend.*

Three plates are given of the morbid derangements observed in the intestines in fevers.

As Dr. Bright's volume is so costly as to prevent its circulation in this country, and as its contents are highly interesting, we have been induced to extend our notice beyond the usual limits, and have placed in our periscope some of the most interesting cases.

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2. *Anatomisch Chirurgische Abbildungen nebst Beschreibung der Chirurgischen Operationen, nach der Methoden von* Rust, Græfe *und* Kluge. Von Ludwig Joseph Von Bierkowski, &c. &c. Berlin, 1826. 1 vol. 8vo. pp. 576. (Second vol. not yet published.) With forty Lithographic plates in folio.

Bierkoffski's anatomico-chirurgical illustrations and descriptions of surgical operations, according to the methods of Rust, Græfe, and Kluge, three highly distinguished German professors, is a valuable and beautiful work, the whole of which we hope is by this time published. The plates are of the size of life, and the relative positions of the parts to be operated on, as well as the figure and extent of each external incision, is marked in such a manner as to afford the most satisfactory memoranda to the student or practitioner. Although this work is principally intended to describe the operations of the professors above-named, yet it is not exclusively confined to stating their methods, as those of Lisfranc, Cooper, Beer, Gauttani, &c. are occasionally given. Each operation is described according to the different stages or "acts" to be observed by the surgeon. The general style of this volume is clear, concise, and explicit, characters peculiarly distinctive of modern German didactic works.

Three editions of it have been printed. The first, and best, is printed on the finest Swiss vellum paper, with the muscles and vessels neatly illuminated; the muscles flesh-coloured; the arteries of a vermilion tint; and the veins blue. The second edition is printed upon fine cap paper, having only the vessels coloured, as in the first edition; while the third is printed upon ordinary, (though not course,) paper, and the plates are not coloured. The price is not stated.

In a mere notice like the present, we cannot attempt to offer a satisfactory statement of all the peculiarities of Rust, Græfe, and Kluge's modes of operating. But the following observations of Dr. Bierkoffski, made in a note to the description of Cooper's operation upon the aorta, may prove interesting, and we translate them especially on account of his experiments.

"The course of the blood to the inferior extremities, (when the aorta is tied,) is readily understood, if we recollect the anastomoses between the internal mammary and epigastric, the lower lumbar and circumflexa ilii, and the hemorrhoidal and pelvic arteries. These small vessels, indeed, bear no proportion to the inch-wide aorta,[*] and consequently when the latter is tied up, the inferior extremities are very sparingly supplied with blood, and therefore are debilitated; the pulsation moreover cannot be discovered while the force of the pulse is expended upon the channels afforded by the innumerable delicate anastomoses through which the circulation is then kept up. As time alone gradually restores the strength of the pulse, the limb will at length be gradually nourished to a due degree and recover its former strength. The small vessels before mentioned can, in time, become somewhat enlarged, but much time is requisite that the vessels above the ligature should gradually form a set of spirally arranged new vessels around about the aorta, and unite with the proper trunk below the ligature. Having, however, had no opportunity of observing this condition, we shall not hazard an opinion. We can say but little upon the subject, as we have but one instance in which the operation has been performed on a human being, and Cooper's patient died within forty hours after the ligature was applied: (might there not have been some complication in this case?) If conclusions drawn from inferior animals were applicable to man, we might say that when there is no other resource, the ligature may be advantageously applied to the aorta.

"With a view to satisfy ourselves of the restoration of the circulation to the inferior extremities, by the formation of new vessels, the following experiments were made.

"On the 20th of January, a ligature was tied around the descending aorta, (of a cat of two years old,) at its posterior extremity. The animal was very restless during the operation, three loops of intestine protruded through the single wound, which was along the linea alba an inch and a half in length, and it was very difficult to apply the ligature properly. The protruded intestine was replaced, the ligature confined at the posterior angle of the wound, and the wound was closed by the bloody suture.

"On the 21st of January we tied the aorta of another cat of two years and a half old, with more care and precaution, at the same point as in the preceding. This cat was so secured that during the operation she could make no movement, and to prevent with certainty the surrounding of any portion of intestine by the ligature, we used an instrument made of wire, in order to pass it without obstruction. With the aid of this instrument the ligature was very easily applied, and we were very careful to observe that no intestine was included, and to allow none of the bowels to protrude through the wound. The wound was drawn together with stitches.

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[*] "Diese kleine Gefaess stehen zwar in keinem Verhaeltniss zu der fingerdickenen aorta."

"The cat which was first operated on, after the application of the ligature, walked with difficulty; in the evening she lapped a little milk. On the succeeding day, January 21st, she appeared very weak, lay constantly extended upon her belly, and slept with her head upon her fore-feet. When roused, she stood up, but could not walk more than a few steps, mewed several times, looked dejected, resumed her former position and again slept. Some milk was offered, which she merely tasted, and refused to take more. She died on the 25th January, about midnight.

"On dissection it was found that a considerable loop of intestine was included with the aorta in the ligature. Nearly all the bowels were inflamed, in part gangrened, and the aorta was somewhat so. The ligature still remained moderately tight. It is evident, the tying in of the bowel was the immediate cause of death.

"The cat operated on the 21st Jan. moved shortly after the operation, licked the wound frequently, slept very well, and woke suddenly, occasionally mewing; at midnight she took some milk, licked the wound, and slept again. Early on the 22d Jan. we found her sitting on a chair in the room; she seemed very tame, and mewed as if hungry, leapt from the chair, and ate some meat. On the 24th the wound was healed with the exception of the part whence the ligature of the aorta depended. On the 26th this ligature came away; on the 28th the wound was entirely healed, and the animal was as well as ever she had been."

It has always appeared to us, that Sir A. Cooper's operation was deferred until too late a period; and we cannot help believing that it was rendered still less likely to succeed by the manner in which it was performed, working his way through the folds of the peritoneum with the finger nails, and then leaving a catgut ligature of considerable size extending from the aorta to the external wound. This must have added greatly to the irritation, as the peristaltic motion of the bowels must have produced no slight friction against the cord.

J. D. G.

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3. *Histoire Anatomique des Inflammations.* Par A. N. Gendrin, M. D. Secrétaire-Général du Cercle Médical de Paris, &c. &c. Paris, 1826. 2 vols. 8vo. pp. 1364.

After two thousand years of wanderings in the wilderness of hypotheses and conjectures, medicine has at last attained the road leading out of the labyrinth in which it has so long been entangled. The imperishable honour of being the first to explore this path, is due to Bichat. It is true that its direction was indicated by Bordeu and Pinel, but it was Bichat who first advanced any distance, and who proved it to be the road by which medicine was to arrive at its highest possible state of perfection. His discoveries mark an era as important in medicine, as do those of Lavoisier in chemistry, or Newton, in natural philosophy.

Formerly, anatomy taught the position, size, and configuration of the organs; a knowledge no doubt useful, particularly to the surgeon, but of little service to the physician in his investigations into the nature of diseases, and the best means of cure: physiology was a distinct science, and pathology could scarcely be said to exist. Bichat, by means of the scalpel, and where that failed him, with the aid of chemical reagents, ascertained the elementary parts or textures of which the body was composed, pointed out their properties, combinations, and appearances in health, and showed that each tissue, in the structure of whatever organ it might occur, presented in disease identical phenomena. He thus created a new anatomy, a new physiology, and a new pathology, one founded on the other; a physiology based on anatomy, a pathology erected on physiology, each forming stories of the same edifice, and together forming a durable and splendid superstructure. Unfortunately for science, Bichat's career was cut short by an early death, but the brilliant discoveries at which he arrived by his mode of investigation, have induced many disciples to follow zealously the same path, and medicine is daily advancing by their labours to a state of perfection equal to that of the other sciences.

Among the followers of this great master, Dr. Gendrin will, we think, stand conspicuous. Bichat ascertained and described most of the healthy and some of the pathological characters of these tissues, but he left by far the greater portion of the extensive and rich field of pathology to the exploration of others.

Dr. Gendrin has engaged in this investigation, and in the work the title of which stands at the head of this article, he has endeavoured to present us with as full and accurate an account of the changes produced in the tissues by disease, as Bichat has of the tissues in a healthy condition. His work is divided into three books. The first book consists of thirteen chapters, the first twelve of which are devoted to a brief description of the characters of each of the tissues in health, followed by a full account of the effects produced in each by the different forms of inflammation to which they are subject, as acute, chronic, phagedenic, and gangrenous; the last chapter comprises the history of adhesive inflammation in each of the tissues, with an account of the anatomical characters of adhesive inflammation in general.

The second book treats of the alterations which follow inflammation, and consists of two parts. The first part is devoted to an account of the alterations produced in the fluids by disease, and is divided into three chapters. In the first, the author describes the blood in its healthy state, and the alterations produced in it by inflammation; in the second, the fluid products of inflamed tissues; and in the last, the alterations in the fluids produced by changes in the organs which secrete them. The second part is devoted to a description of the alterations of texture which follow inflammation, and is likewise divided into three chapters. The first relates to immediate adhesion succeeding inflammation; the second to the membranes which form on the parieties of accidental cavities in the substance of the organs, as cysts, and the lining of fistulous canals, the third to the preternatural laminæ and fibrilla which form on the surface of inflamed membranes.

In the third and last book, the author treats of the comparative anatomy of the alterations of the tissues, both those produced by inflammation, and those which are not, and he divides this book also into three chapters. In the first he describes the idiopathic and inflammatory softenings of the bones, of the mucous and villous, of the nervous and of the muscular tissues: in the second, the comparative anatomy of tuberculous and inflamed tissues: in the third, the comparative anatomy of the scirrhous and carcinomatous and inflamed tissues —and concludes the work with a summary of the anatomical history, including the theory, general principles, and rational treatment of phlegmasias.

It will be perceived from the above sketch; that the plan is full and comprehensive, embracing, indeed, the whole range of pathology, a subject hitherto little investigated, and one, the investigation of which demands persevering and laborious research, talents for observation, and a mind free from prejudice and anxious only to arrive at the truth. M. G. appears to have brought to the task all these requisites, and to have had the advantage of numerous opportunities for observation, which have enabled him to illustrate every part of his work with interesting cases. We should be much pleased to see this work translated into our language; it would be a most valuable accession to the library of the student of medicine.

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4. *Traité de l'auscultation Mediate et des Maladies des Poumons et du Coeur.* Par R. T. H. Laennec, Medécin de S. A. R. Madame Duchesse De Berry, Lecteur, et Professeur Royal de Medecine au college de France, Professeur de Clinique à la Faculté de Medecine de Paris, &c. &c. &c. Seconde Edition entierement refondue. Toms. 2. Paris, 1826, pp. 1518.

A Treatise on the Diseases of the Chest and on Mediate Auscultation. By R. T. H. Laennec, M. D. &c. &c. Second edition, greatly enlarged: **translated from** the French, with notes and a sketch of the author's life, by John Forbes, M. D. Member of the Royal College of Physicians, and Senior Physician to the Chichester Infirmary. With plates. London 1827, pp. 722.

The profession will be pleased to learn, that a new edition of the classical work of Laennec, has been published, enlarged and corrected from the observations which the author has made during the seven years that have elapsed since the publication of his first edition. During this period, he has assiduously employed himself in collecting new proofs of the correctness of his principles and of the accuracy and precision of his method of examination, and in extending his researches on several subjects, which he had formerly not been able satisfactorily to elucidate. In these investigations he has been eminently successful and has been enabled to render his work complete as a pathological and practical treatise on the diseases of the organs of respiration and circulation.

The additions to the present work are so numerous, and the alterations so considerable, that it ought rather to be considered as a new work than a new edition of the former, though all the contents of the first publication are comprised in this. The arrangement of the present edition is much more natural and physiological than that adopted in the former one. The chapters on pituitous catarrh, on dry catarrh, on dilatation of the bronchia, on emphysema of the lung, on perypneumony and gangrene of the lungs, on pulmonary tubercles, on diseases of the heart, &c. have been much enlarged; and on several subjects new chapters have been added, as on symptomatic catarrh, suffocative catarrh, croup, bronchial hæmorrhage, hypertrophy and atrophy of the lung, &c.

The translation by Dr. Forbes appears to be faithfully executed, and is enriched with notes by the translator. The original is written in rather a diffuse style; in the translation the cases are considerably abridged, and the rest of the work much condensed. We hope an edition of this work will speedily be published in this country, that American practitioners may possess themselves with a work, which is, without question, the most valuable ever written on the pathology and diagnosis of the diseases of the thorax, and, indeed, may be considered as almost perfect in its kind.

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5. *Grundriss der Chirurgischen operationen, von* D. Gottlob Bernhard Schreger, Kœnigl, Baierschem Hofrathe, &c. &c. Nurnberg, 1826, 2 vol. 8vo. pp. 1000, third edition, revised and enlarged.

This is the most complete and satisfactory view of the elements of operative surgery we have yet seen; and we are not surprised that it should have been several times enlarged and reprinted within a few years. The operations of surgery are not merely described, but the history of the rise and progressive improvement of each operation is given; the instruments used in performing them are referred to their respective inventors and improvers, and the different modes of operating employed by distinguished and experienced surgeons of all countries, are succinctly and perspicuously stated. The various operations are accompanied by ample references to valuable treatises and papers on the subject, so that the reader has always within view a catalogue of the best books to be consulted, when he desires to extend his acquaintance with the operation.

No one can examine German scientific works, without being pleased to observe the liberality they display towards those devoted to similar pursuits in other countries than their own, as well as the full credit they give to the authors of improvements, however obscure the individual may be. Such conduct is highly commendable, and the imitation of it may be urged upon the cultivators of medicine generally. Dr. Schreger's work is worthy of being well translated, and unless we are much mistaken, it would be considered an acceptable addition to the libraries of American surgeons. J. D. G.

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6. *Manuale Clinico di Obstretricia di* Francesco Asdrubali, Tomi 2e 8vo. Roma, 1826, pp. 835.

The author of the above cited work on the obstetric art, is one of the most celebrated and erudite practitioners in Italy, he is at present professor of midwifery in the college of Sapienza, and has already published much on this branch of medicine. His first work, which appeared in 1795, was the Elements of Obstetrics: this treatise was received with great eagerness by the profession throughout Italy. This was succeeded in 1812 by a very voluminous work on the theory and practice of midwifery, and afterwards by the present, which appears to be an abridgment of the practical portion of the larger work.

As in most treatises on medicine, published on the continent, and particularly in Italy, there is a great portion of it occupied with references to the earliest known authorities, which, although useful in a history of the science, seldom are of a sufficiently practical nature to be relied on in the present advanced state of the healing art. Dr. Asdrubali appears perfectly acquainted with the writings of cotemporary authors, and refers constantly to them, particularly to those of M. de Lachapelle and Baudelocque, his work also contains some excellent observations on the different points of legal medicine connected with obstetrics. As this is one of the latest works on midwifery which has issued from the Italian schools, we will give a short analysis of its contents, judging that our readers would feel anxious to learn what progress this important branch has made in that country.

The author begins by treating of parturition in general, and of the anatomy of the pelvis, and organs of generation, and like Barclay and Chaupier, wishes to establish a nomenclature in anatomy, similar to that adopted in chemistry, thus he terms the ossa innominata, the bi-ileo, ischio-peltinee, ventaglio-forme. He is a strenuous supporter of the general existence of the hymen, although he very properly admits that its absence is not a proof of the loss of virginity; in treating of the last subject he divides it into perfect, mixed and imperfect.

Dr. Asdrubali's division of pregnancies differs somewhat from those adopted in this country, he terms them:—1. Fortunate pregnancies when the womb contains a living fœtus. 2. Unfortunate when it is extra-uterine, or when the fœtus is dead. 3. False when there is a mole or hydatids. 4. Mixed when there is a living fœtus accompanied by a mole, &c.

After describing the natural positions of the head of the fœtus during labour, he discusses at some length, the posture that the woman is to maintain during delivery; and finally decides, that the best is a sofa, on which a hard mattrass is placed, which should be inclined towards the feet of the patient; he recommends that an accoucheur should if possible always have three assistants.

Our author's observations on the treatment of the placenta, are founded on just principles, and deserve attention. He details many cases in which irreparable injury has ensued from the haste and violence of the accoucheur in bringing away the after-birth.

The next chapters are devoted to natural and preternatural, (*morbose,*) labours, these, from the cursory glance we have made of them, appear to contain little that is new and interesting; he then proceeds to the consideration of instruments, and recommends strongly the use of the lever, not the instrument generally known in this country under that name, but a blunt instrument to support or change the position of different parts of the body of the child; he also makes much use of the fillet.

In the succeeding chapters are noticed the Cæsarian operation and division of the symphysis pubis, of which, he prefers the former; observing, that viewed in every light, the latter is much more dangerous, and far from being as certain as the Cæsarian section.

The last chapters are devoted to the consideration of the accidents that take place during labour, as laceration of the womb, or perineum, uterine hæmorrhage, &c. R. E. G.

7. *Sulla Ottalmia Pustolar-Contagiosa.* Del Chirurgo Gaetano Buzzi. Prato, 1825. 8vo. pp. 100,

The study of ophthalmology has of late years attracted much attention from the medical profession, and consequently has advanced rapidly in certainty and usefulness. That this is attributable to our increased knowledge of the different tissues cannot be denied, and must be evident to the most cursory observer. Pathology, once a complete chaos of unconnected facts, is now becoming a science beautiful in its connexions, and certain in its results.

We have long been indebted to Italy for useful information on diseases of the eye, the labours of Scarpa alone would have entitled her to claim a high rank among the benefactors of mankind, he gave an impulse to the successful investigation of the structure and diseases of the eye, which has been unremittingly followed by his contrymen, among whom may be mentioned Assalini, Vasani, and the author of the treatise under consideration.

This work has been published two years, but we believe has never been noticed in our journals—the author gives his practical knowledge and the fruits of his experience in a simple and brief form, without loading his work with the speculations of others further than is incidentally required, and displays a perspicuity of observation that will make his few pages valuable to the medical world.

It contains a detail of many experiments instituted by him to ascertain the fact of the contagious nature, and the best means of cure for this dangerous form of ophthalmia. This subject is of such practical importance, and has so often been the topic of violent disputes, that we have thought it would be interesting to our readers to give a short analysis of the work.

After observing that every author who has written on the disease has given it a new appellation, he falls into the same error, and proposes that of pustular contagious ophthalmia, thus adding to the confusion already existing, from writers describing the various forms of the disease under different names.

His reasons are as follows:—"Having observed that this form of ophthalmia is always contagious, and that from its very commencement, or rather from the moment it is perceptible, there are always to be discerned on the conjunctiva covering the globe of the eye, pustules, abrasions or ulcers, I determined to bestow on it a name which would at once define it and give its principal characteristics."

Dr. Buzzi denies positively that the first appearance of this disease in Europe was immediately succeeding the arrival of the troops from Egypt in 1798, and says that "the contagious pustular ophthalmia is peculiar to all countries, and exists at all times, that it is certainly more common in Egypt, as its predisposing causes are more frequent and permanent in their action in that country." He has seen it arise in Florence in an individual who communicated it to his whole family, and what is worthy of observation, that the first attacked were the youngest children from whom it was successive in its progress to the adults. He says that it occurs most frequently in children of scrofulous habits, and as this latter disease is so prevalent in Florence, it accounts for the number of blind, who are to be seen in that city.

Dr. B. considers that improper and scanty food, impure air, uncleanliness,

&c. are all predisposing causes of ophthalmia, and that some individuals are much more susceptible of its attacks than others; he details an extraordinary case of the supposed contagion of this disease from Vasani. "In 1817, a hospital was established in Ancona for the reception of ophthalmic patients, the poultices, &c. used by the patients were thrown from a window and fed on by fowls, and strange to relate, these birds were all attacked with purulent ophthalmia in so violent a degree as to become blind"—the author afterwards details some experiments he made, which certainly tend to show that the purulent matter from a diseased eye is capable of exciting inflammation, and a purulent discharge when applied to a sound eye; he thinks these are conclusive as to the fact of its contagious nature, we have no doubt of the fact that the purulent matter from a diseased and ulcerated eye is capable of inducing a similar state of things when applied to a sound eye, but we are also of opinion that any acrimonious discharge from a mucous membrane when applied to the eye would induce a purulent ophthalmia, it is owing to the overlooking of this circumstance that the science has been loaded with so many divisions of purulent ophthalmia, as Egyptian ophthalmia, gonorrhœa, &c.

We shall not follow our author in his description of the disease, and the progress of the symptoms; as these, although faithfully and accurately given, are familiar to every one; but proceed to his mode of cure; this he details at some length, but the whole may be given in a few words. To diminish the inflammation by local depletion and topical applications, to keep the eye clean and as free as possible from an accumulation of the purulent discharge, to create a counter-irritation by means of blisters behind the ears, to pay strict attention to the state of the alimentary canal, and to maintain a strict diet. In the chronic state, and when ulcers exist, he advises the use of a solution of corrosive sublimate, 1 gr. to ℥v. of water, he has also found benefit in these cases from a wash of lime water, in which two grains of sal. ammoniac have been added to each ounce.

R. E. G.

8. *An Inquiry into the Nature and Treatment of Diabetes, Calculus and other Affections of the Urinary Organs: with Remarks on the Importance of attending to the State of the Urine in Organic Diseases of the Kidney and Bladder; and some Practical Rules for determining the Nature of the Disease from the Sensible and Chemical Properties of that Secretion.* By WILLIAM PROUT, M. D., F. R. S. From the second London edition, revised and much enlarged: with notes and additions by S. CALHOUN, M. D. &c. Philadelphia, 1 vol. 8vo. pp. 308.

When we take into consideration the obscure pathology, painful nature, and great intractability of diseases of the urinary system, we are glad to see a second edition of Mr. Prout's valuable treatise upon the subject, with proofs that it still receives his able investigation. In its present form we believe the work embraces more interesting and authentic information relative to these affections than any other we know of, as, in addition to the store furnished by the author, the American editor has added to the volume nearly all the valuable matter upon the subject, to be found dispersed through the writings of others.

That those who have never examined the work, may have some idea of the contents, we shall condense a few remarks from it of a general nature.

Mr. Prout has indicated with great skill and precision, the constituent parts of the blood and urine. When a comparison is instituted between the comparatively simple composition of the former, and the heterogeneous character of the product derived from it, we cannot fail to be struck with surprise at the wonderful powers of elaboration possessed by the kidneys. As Berzelius has previously remarked, *acidification* seems to constitute the chief feature in these operations. Thus, for example, in the healthy process, the sulphur and phosphorus of the blood are converted by the kidneys into sulphuric and phosphoric acids; a new acid, the lithic, is generated, etc: but in certain morbid conditions, this acidifying tendency is carried to excess, giving occasion to the production of the nitric acid, oxalic acid, &c. At other times, however, it is diminished or suspended, and unchanged blood, or albuminous matter; neutral substances, as urea or sugar; or even alkaline substances, as ammonia, lime, and magnesia, are separated in abundance; the phosphorus and sulphur naturally belonging to the blood, passing at the same time through the kidneys and bladder without being acidified.

"It may be remarked in general," says Mr. Prout, "that when acids are formed in excess by the kidneys, the urine is commonly small in quantity and high-coloured, and the disease inflammatory. When neutral or alkaline substances, the urine on the contrary is generally pale-coloured and large in quantity, and the diseases are those of irritation and debility."

The author of the treatise has divided diseases of the urinary organs into three general classes. 1st. *Functional* diseases; comprehending all those affections arising from a deranged operation of the kidneys. 2d. *Mechanical* diseases; including all those arising from the mechanical irritation of solid foreign bodies, as calculi, &c. 3d. *Organic* diseases; or those connected with disorganization of some portion of the urinary organs. These general divisions are subdivided into other heads, so as to embrace each disease common to the urinary system. The closeness with which the author and editor have adhered to practical points is certainly very praiseworthy, and the chemical details of the former, which constitute the basis of most of his inquiries, are exceedingly plain, concise, and intelligible. G. E.

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9. *Encephali Anatomica Descriptio a Doctore* Lupi, *filio, peracta. Romæ,* 1826, pp. 69.

This unpretending pamphlet contains an accurate view of the improvements made in the investigation of the anatomy of the encephalon, by Gall, Spurzheim, Meckel, Cloquet, Chausier, &c. and was published by Dr. Lupi, the younger, for the use of students, whose books generally contained the anatomy of the encephalon according to the ancient "cheese-slicing" method. If we feel any regret in relation to this description of the brain, it is, that the author did not give it in his own beautiful language; for whether it be owing to the nature of the subject, or to the difficulty of arranging technicalities in the language of ancient Rome, or to any other cause, the Latin of this description sounds peculiarly flat in general, and is in many instances rugged and unpleasant. It is, nevertheless, throughout correct and clearly comprehensible; merits which, on such a subject, might fully compensate for greater defects than mere mediocrity or slight inelegance of style. J. D. G.

10. *Replica di* L. Metaxa *all'apologia di alcune postille Scritte da* D. Meli. Roma, 1826, pp. 75.

The melancholy truth that neither learning, talent, nor station always exempt individuals from human frailties and passions, is clearly confirmed by the pamphlet before us: it moreover indicates that the "*genus irritabile,*" comprises a greater number of *species* than is commonly referred thereto. The cause of complaint against Signor Meli is that of having published a criticism upon a medico-legal dissertation, written by Professor Flajani, in which, on the supposition of its having been written by Dr. Metaxà, Meli abuses the latter scurrilously and personally.

We have, heretofore, had occasion to pay due homage to the professional learning and intellectual acumen of Professor Metaxà, in his paper on the case of Crespi, who was tried on the charge of having committed a rape upon the person of an immature female.* We have also recently received his *second* memorial on the same subject, in which his claims as an investigator of medico-legal evidence are shown to be of the highest order. With his especial quarrel we have nothing to do, and very little to say, except, that judging by the coarse and scurrile epithets which he quotes as used against him, he has stooped to notice an aggressor altogether unworthy of his attention.

But we may be allowed to call the attention of the profession to the subject of this sort of warfare in general; and to invite those who are desirous of seeing the dignity of the medical character augmented and sustained, to unite in discountenancing similar exhibitions of ignobleness, passion, or egotism. It is no doubt true, according to the words of Sallust, adopted by the author of the pamphlet, "nulli mortalium injuriæ suæ *parvæ* videntur," but it is not less true, that few, very few, instances can occur, in which injuries sustained in the business of life by an individual will prove sufficiently *great* to interest the feelings of a whole community. The frequent references to the public to determine whether A has not greatly injured B, or C has not exceedingly misrepresented D, &c. may appear of great importance to the querists themselves, but can have little other influence upon the public besides that of causing the *profession* to be regarded as peculiarly addicted to malevolence and strife, and thence, to diminish the respect entertained towards the whole body.

It is certainly a severe trial to have abuse and misrepresentation published against one, and occasionally from men who are, "ex officio," supposed to be respectable, and not to reply; more especially where we feel confident that we could readily prove that the aggressor is as incompetent to judge, as he is violent and abusive. Nevertheless, the most usual causes of altercation, and reference to the public, are of a nature to call for forbearance and self-respect, rather than an appeal to that "public" which cannot or will not take time to inquire into the true state of the case. Upon your true literary Aspic, the severest infliction is the contempt of entire neglect; no greater suffering can such creatures experience, than that which follows from perceiving that their most concentrated venom is so innoxious, as not even to provoke the motion of a finger for their removal.

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* Philadelphia Med. and Phys. Journal, vol. ix. p. 427.

As long as men are differently educated and variously endowed by nature and fortune, we must expect differences of opinion and discrepancies of judgment, even from an examination of the same data. These differences, so long as those who exhibit them are influenced by correct and honourable principles, tend to produce inquiry and promote improvement. But the altercations which spring from disingenuous artifice, and are hurried before the public by passionate egotism, are always injurious to the profession. Just, however, is the decision of the public, in almost every instance, that both sides are in the wrong: yet the justice awarded the individuals rarely fails to cause a part of the *odium* to be imputed to the *profession.*

As a remedy for such evils, we would beg leave to propose a greater scientific and social intercourse among the members of our profession, with a view of eliciting truth by courteous interchange of sentiment, and by mutual exertions in the cause of science, to inspire a feeling of noble emulation. Where individuals exhibit that unhappiness of temper which renders them almost universally obnoxious and disagreeable—let them be politely shunned—"put into Coventry"--left to their own society, until they learn to appreciate the privilege of associating with those, who, in the pursuit of fame and fortune, never for an instant forget the rights and feelings of cotemporary aspirants. J. D. G.

QUARTERLY PERISCOPE.

FOREIGN INTELLIGENCE.

ANATOMY.

1. *Structure of the Nerves.*—"With the view of ascertaining whether these organs are canals or not, M. Amussat has attempted to inject them; and laid before the *Académie de Médecine*, at a recent meeting, an anatomical preparation, from which it appeared, that when the nerves are injected with mercury, from the branches towards their origin, the fluid, instead of reaching the substance of the spinal marrow, falls into the cavity of the dura mater; that when a common trunk, or a nerve, near its origin in the spinal marrow, is injected, the mercurial tube being directed along the side of the organs, the mercury does not penetrate the neurilema, so that these two injections, thrown in opposite directions, with regard to the same nerve, prove that there are two investing membranes or neurilemata; and that when nerves are injected, the fluid passes between them—when a bundle of nerves is injected from an origin above their ganglia, on directing the tube towards the spinal marrow, the mercury frequently penetrates a blood-vessel of the fasciculus, which proves beyond a doubt that it is not the nerve itself that is injected in this manner, but an artery."—*Révue Méd. Juin,* 1827.

2. *Spurious Hermaphrodism.*—The following "conformation of the organs of generation, was observed in a male subject who died at the age of sixty-seven. The labia were closely imitated by two longitudinal folds of the skin, at the upper part of which was an imperforato penis, which might have passed for the clitoris. The opening of the urethra was beneath, and at the root of this appendage—below which again was a round opening, terminating in a *cul de sac,* giving something like the aspect of a vagina. There was even a membranous fold across this, perforated in the centre, which might have passed for the hymen. The labia resembled those of an old woman; but there were no substitutes for the nymphæ. The testicles were above the inguinal ring. The possessor of these peculiarities had always passed for a man. The breasts were not developed; he was rather inclined to be lusty; had a scanty beard; was feeble both in body and mind; never manifested any sexual propensities; and, in fact, was considered impotent."—*Journal des Progrès, vol. iii.*

3. *Case of Monstrosity,* by J. Tucker, Esq.—" The fœtus appeared to be full grown; and there being a division throughout the chest and abdomen, the whole contents of both cavities were exposed to view. The display of the thoracic viscera arose from a separation through the median line of the sternum, which extended to the pubes; the edges of the recti muscles were reverted as it were, and faced with a white, tendinous border. But the deviations did not

end here. The right hand exhibited but one finger, and the left foot but one toe. The umbilical chord made its exit on the back, between the scapulæ.

"Immediately on delivery, the child cried lustily, and lived for two hours, during the greater part of which I had the heart in my hand, and witnessed the vena cava returning the blood to its right side, and its reception on the left from the pulmonary vein. The aorta and pulmonary artery were also both distinctly seen, together with their actions.

"As all the abdominal viscera were out of the cavity, by simply turning them aside I could see the descending aorta and the ascending cava."—*Lond. Med. Repos. and Rev. Nov.* 1827.

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4. *Structure and Derangements of the Lymphatic System.*—"M. Amussat has presented to the Académie Royale some anatomical preparations, exhibiting an injection of the abdominal lymphatics, and a demonstration of the fact, advanced by certain Italian physiologists, that there is a communication between these vessels and the veins: this communication is established between the lymphatic glands and the large trunks, through the medium of certain canals. In these preparations the mercury passed direct from the lymphatics into the cava and the common iliacs.

"The same gentleman also exhibited a morbid preparation, taken from the body of a person who had died of small-pox. In this subject, the attempt to inject the lymphatics had been made in vain; and the obstacle was found to consist in the lymphatics of the abdomen, and even the thoracic duct itself, being loaded with blood. This last-mentioned phenomenon appears to have been observed by others; but it is not indicative of an inflammatory state of the vessels themselves; which, after removing the blood, (absorbed by them in all probability,) exhibited their natural physiological state."—*Journal Gén. Mai,* 1827.

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5. *Bilobate Uterus.*—M. Berard, Jr. found on examining an insane patient, aged fifty-six years, who died at the hospital, Salpêtrière, the following formation of the genital organs. "The uterus viewed externally was divided by a deep fissure, extending from its superior border to its neck, into two perfectly distinct lobes, although irregularly puckered and deformed by fibrous bodies projecting from its surface. From the external extremity of the superior border of each of these lobes, originated a fallopian tube surmounted by an ovary, and a round ligament. The internal extremity of the same border scarcely existed, being continued imperceptibly into the fissure. On dividing the lobes to observe their cavity, other fibrous bodies were found in their tissue. The cavity of the lobes in which were suspended other very small fibrous bodies, had sufficient capacity, an almost vertical direction, and formed but a slight angle with that of the neck. This like the body of the uterus was divided into two parts, but by a partition only which was continued the whole extent of the vagina, as far as beneath the meatus urinarius, in such a manner that there were two vaginas corresponding to the two neck of the uterus, entirely separated. Great thickness of the vagina especially near the vulva, the partition was formed by a duplicature of the proper membrane of this passage, which could easily be made to move one on the other. Numerous transverse rugæ furrowed the mucous membrane. Two or three fleshy tubercles, the remains of the hymens, existed at the external orifices, which opened into a single, naturally formed vulva."

This woman had had but one infant, born at the full period, which died during birth, after a difficult labour. The existence of this singular conformation was not suspected during life.—*Journal des Progrès, vol iv.*

PHYSIOLOGY.

6. *On Vital Motion, by* M. H. Dutrochet.—M. Dutrochet has recently published a work on vital motion, in which he details experiments and discoveries, of a most interesting and extraordinary character, calculated to throw a new light upon an important portion of physiology. As Mr. D.'s discoveries are of extreme interest, and as no copy of his work, has we believe, yet reached this country, we extract from an analysis of it in the *Foreign Quarterly Review, No. I.* a notice of some of his most interesting observations. When we receive the book, we shall give further details.

"Having cut off the tail from a small fish, and preserved it alive in a vessel full of water, M. Dutrochet soon afterwards perceived, on the surface of the wound, a species of aquatic mouldiness, consisting of long filaments, each of which was terminated by a small swelling or bulb, perceptible to the naked eye. These filaments were transparent, but the bulbs were opaque, pointed, and resembled the capsules of a plant. He divided some of these filaments transversely, and having placed them, with a little water, in a watch-glass, under the microscope, saw some of the bulbs expel numerous globules through an opening situated at their apex, without any apparent contraction or diminution of their size, the space previously occupied by the globules being filled with water, which seemed 'to perform here the office of the piston of a syringe, for raising and expelling at the point of the capsule, the mass of globules which at first totally filled the capsule.'—p. 106.

"The whole of the globules were soon expelled from each bulb, and owing to a peculiar motion which they displayed at the instant of their expulsion, M. Dutrochet was inclined to believe that they were the animalcula described by Needham and Bory de Saint Vincent; but subsequent observations convinced him that this was not the case, but that they were seeds of the plant, on whom a transitory movement had been impressed by the force of their expulsion. Reflecting on this phenomenon, and believing that the water which was introduced into the part of the capsular cavity opposite to the point of expulsion was the mechanical instrument of the *vis a tergo*, which produced the expulsion of the globules, our author naturally inquired—whence comes this water? and by what power is it carried into the interior of the capsule? To enable him to answer these queries, he repeated his observations upon the bulbs of mould produced on dead animal matter in water, and also upon the little sac which contains the spermatic paste of the snail, and which, when placed in water, expels its contents in the same manner as the bulb of the mould. From these experiments, our author arrived at the conclusion, that these small hollow organs have the faculty 'of introducing with violence, into their cavity and through their sides, the water which bathes their exterior surface; and this in such a manner as to expel from that cavity substances which it previously contained.'—p. 114. M. Dutrochet was, as yet, unable to assign a cause for this *physico-organic* phenomenon, to which he applied the name of *endosmose;** but he ascertained, that it does not occur unless the matter contained in the little cavities be of a greater specific gravity than the water or fluid which surrounds them; and he conceived the possibility of demonstrating this, by obtaining an analogous result on a larger scale, and with a more manageable apparatus. For this purpose, he selected the cæcum, or blind-gut, of a young chicken, into which after cleaning it with pure water, he put 196 grains of milk, a quantity sufficient to fill one half of its cavity only; and then, having tied a ligature firmly round its open extremity, he placed it in water. After twenty-four hours he found that the cæcum had imbibed as much water as increased its weight 73 grains; and at the end of thirty-six hours, 117 grains of water had entered it, and the gut was become very turgid. But from this time the weight of the intestine gradually diminished; and, at the termination of thirty-six hours, it had lost 54 grains of the water which it had previously imbibed, and the milky fluid within it had become putrid. The temperature during the experiment was from 18° to 21° degrees of Reaumur. The repetition of this experiment with various modifications, and with different fluids introduced into the gut, decidedly demonstrated, says M. Dutrochet, 'that the introduction of the water into the organic cavity depends altogether on the contained fluid being denser than that containing the cavity. As long as this fluid remains undecomposed, the endosmose continues; but the instant that it becomes putrid, the endosmose ceases, and the water, instead of entering into the cavity as before, passes out of it, and with as much rapidity as it entered.'—p. 125. He at first attributed the passing out of the water to the ceasing of the endosmose; but he soon ascertained, by reversing his experiments, that it is as much a specific action of the organic membrane as that which causes the introduction of the fluid; and that when the gut was filled with a thinner fluid than that in which it was placed, the fluid passed out of it with as much rapidity as it entered in the opposite experiment. This action M. Dutrochet has named *exosmose.** He next ascertained that when chemical fluids, even of a less density than water, are employed, *endosmose* takes place when the solution contained in the closed gut is alkaline, and *exosmose* when it is acid.

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* From ενδον, inward; and ωσμος, impulse.

"As *endosmose* produces an excess of turgidity in any hollow organ endowed with it, and necessarily extends the sides of the cavity so as to cause them to re-act upon the contained fluid, our author conceived the idea that this would be sufficient to cause water to ascend in a tube, the inferior extremity of which should be fixed into a hollow organ in the state of endosmose, an opinion which was confirmed by experiment. Among other experiments, contrived to prove this fact, he fixed the open end of a glass tube, six decimetres in length, and the bore of which was five milimetres in diameter, into the cæcum of a chicken, filled with a solution of gum Arabic; and having plunged the closed gut into rain water, he supported the tube in a vertical position. During twenty hours the fluid was perceived ascending in the tube until it reached the top, out of which it flowed; and this it continued to do until the third day, when it began to sink; and, on the fourth day, the cæcum being opened, the fluid was found to be putrid. Similar results were obtained by employing the swimming bladder of the carp, and even the inflated pod of bladder senna, (colutea *arborescens,)* instead of the cæcum, demonstrating that endosmose was not confined to the organic membrane of animal cavities, but was equally the property of vegetable membrane.

"The mere fact of a thin fluid, separated from a denser by an organic membrane, passing through that membrane towards the denser, would naturally excite in a philosophic mind the idea that this effect might be the result of an electrical action, the contact of bodies of different densities being a well known cause of electricity; our author, therefore, formed the opinion that it is the electrical influence which impels the molecules of the liquid through the organic membrane, both in *endosmose* and *exosmose;* and he was confirmed in this theory by the following experiment of M. Porret. This philosopher having divided a cylindrical jar into two compartments, by means of a bladder, filled one of these compartments with water, and put a few drops only into the other. He then placed the negative pole, *(zinc,* or *the less dense,)* of a galvanic pile into the compartment filled with water, and the negative, *(copper,* or *the denser,)* into that which was nearly empty: the water was forced through the bladder into the empty part of the jar, and continued to flow into it until its surface was much higher than that at which it stood in the part originally full. Imitating this experiment, M. Dutrochet having tied one end of a glass tube into the cæcum of a chicken, into which also he fixed another capillary tube, passed the negative wire of a galvanic pile, through a cork fitted to the first tube, into the cæcum, while the positive wire was placed in the water into which the cæcum was put. The cæcum soon became turgid with the water which had passed into it through its sides, and this rose in the capillary tube, and flowed over its open orifice, as in the experiment in which fluids of different densities only were employed. When the wires were reversed, and the cæcum empty, no fluid passed into it, but if the cæcum was previously filled with water, it was quickly emptied. Similar results were obtained when the pod of bladder senna, (colutea *arborescens,)* was used instead of the cæcum, as in the former experiments; but not when inorganic substances were employed: and this is the more remarkable, as the condition of organic membranes, which fits them for *endosmose* and *exosmose,* continues after they have been dried, it being only necessary to soak them in water to renew their power of displaying these faculties. From his experiments with electricity, our author concludes, that all the vesicles, constituting the tissues of animal and of vegetable bodies, operate as minute Leyden phials electrified negatively within, and positively without; and from this continuing to be the case, as long as the integrity of the animal and vegetable textures remains unimpaired, these vesicles continue turgid by endosmose.

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* From εξ, out; and *ωσμος*, impulse.

"It was important to ascertain the effect of temperature on *endosmose;* and M. Dutrochet, after repeated experiments, ascertained that it is augmented in an increased temperature; a result which corresponds with the fact, that by increasing the temperature of two metals, the contact of which produces electricity, the intensity of the electrical current is increased. Another proof of the electrical nature of endosmose was obtained by nearly filling the cæcum of a chicken with white of egg, closing it and plunging it into water. The cæcum soon became turgid; and, being opened after the lapse of some hours, its inner surface was found to be lined with a coating of coagulated albumen; which we know to be one of the effects produced by currents of voltaic electricity.

"M. Dutrochet observes that the organs of animals, with the exception of the blood-vessels in those that possess a circulation, are composed of congeries of vesicles, a fact which can be readily demonstrated in the mollusca, the fundamental conditions for endosmose an exosmose are found in animals; and that their vascular systems may be regarded as merely the channels for irrigating, as it were, the vesicular parts, and carrying to their elementary vesicles new organic matter, which they deposit by filtration by the aid of endosmose. He illustrates this position by examining the phenomena attending *inflammation.* The inflamed part becomes turgid, owing to the fluids in the neighbouring parts being attracted to it by *adfluxion;* the increased calibre of the arteries is owing to the augmented supply of blood which the adfluxion determines to the inflamed part; whilst the veins are dilated by the more than ordinary impulse of the blood, which this part supplies to them in greater abundance and with a greater force than usual. 'Thus,' says our author, 'the inflamed part is at the same time the termination of affluxion and the origin of impulsion for the blood. We have already seen that such are exactly the effects of endosmose in plants. No doubt, therefore, can remain that inflammation is a phenomenon of endosmose. Now this phenomenon, the effects of which are so visible in the morbid state of the body, exists equally in the natural state, but in a less degree of intensity.'—p. 194.

"An objection here presents itself, that all turgescence cannot be regarded as a morbid *hyperendosmose,* to use the language of our author, as a state of turgescence, for example the erectile, is perfectly compatible with a healthy state of the parts. This objection M. Dutrochet has anticipated, and contends that the two states are essentially different, the erectile depending upon one occasional cause only, whereas the morbid depends upon many; for instance, the introduction of foreign matters into the organic tissue, the alteration of the substances contained in the elementary vesicles, and their greater or less fluidity: and he regards it as certain, that the alteration of the fluids contained in these vesicles is the sole immediate cause of inflammatory diseases.

"To the attraction of the blood in the capillary branches of the arterial system, M. Dutrochet ascribes the empty state of its vessels after death; and contends that both the full state of the veins, and the cause of the progression of the blood in them towards the heart, may be explained on the same principles as the ascent of the sap in plants. He admits, however, that other circumstances influence the flow of the blood in the veins; as for example, when there are no capillary ramifications between an artery and a vein, but the one vessel terminates directly in the other, as in the young salamander, in which case the contractile power of the heart is felt through the whole circuit. He regards the idea of a contractile power in the capillary vessels as purely hypothetical; for although these vessels may re-act upon the blood by their elasticity, no real contraction, "incurvation des fibres," has ever been detected. He does not deny the probability of Dr. Barry's theory, that the pressure of the atmosphere, in conjunction with a vacuum formed in the chest during respiration, is the cause of the progression of the venous blood towards the heart, but regards it as an accessory peculiar to the mammalia and birds.

'Thus the circulation of the blood is a complex phenomenon, depending on the concurrence of many different causes, at the head of which is found for one part, the contraction of the heart, and for another, the endosmose of the capillaries; endosmose, which is, at the same time, the cause of adfluxion and that of impulsion.'—p. 196.

"He also applies his theory, with much apparent success, to the lymphatic system, and regards the ganglions as motory organs, maintaining, by adfluxion and impulsion, the motion of the fluids in these capillary vessels.

"We have already stated the opinion of our author, that inflammation or morbid hyperendosmose depends, chiefly, upon the alteration of the substances contained in the elementary vesicles. These may, nevertheless, preserve their integrity, for it is not the containing but the contained parts which are altered. The adfluxion in morbid hyperendosmose extends itself according to the intensity of the disease; and if it be what is termed a vital part that is affected, this becomes a dangerous centre of adfluxion, unless we can divert the fluids to another point by exciting a more powerful hyperendosmose in a less vital part. It is in this manner, according to our author, that blisters, some kinds of purgatives, leeches, and all revelling agents operate; and on this principle he accounts for the benefit derived from the application of cupping glasses in cases of poisoned wounds.

"We must admit, with M. Dutrochet, that the means of combating inflammation have been, hitherto, almost empirical. He, however, conceives that the theory which he has advanced throws considerable light on the physiology of this diseased state, and confidently assumes the following as the most rational method of curing morbid hyperendosmose.

"1. The abstraction of the substance, the presence of which in the organic tissue causes hyperendosmose. When this is a solid body, it must be mechanically abstracted; and if it proceed from an altered state of fluids, the changed fluids must be evacuated by leeches and scarifications, with cupping: the efficacy of which in relieving inflammation experience has fully established.

"2. General blood-letting, by diminishing the flow of the arterial blood in all parts of the body, must necessarily lessen it in the inflamed, or, in our author's words, hyperendosmosed part: and as the void thus caused in the large vessels can only be filled by the general depletion of the capillaries, the inflamed part will become less turgid, and the hyperendosmose be diminished.

"3. Leeches and cupping in the vicinity of an inflamed part relieve the hyperendosmose in two ways. 1. The evacuation of the blood procures the general depletion of the vessels. 2. Their suction causes a derivation in the direction of the affluxion.

"4. An energetic hyperendosmose excited in one part, tends to diminish this state existing in another part. This is the result of the change produced in the direction of the affluxion, the fluids being always directed to that part in which the most powerful hyperendosmose exists. In this way blisters operate, and the relief is always in proportion to the evacuation produced.

"5. As the addition of water, by thinning the fluid contained in the organic tissue, or by weakening its chemical qualities, diminishes the intensity of the endosmose, the introduction of water into the organic tissues is a powerful method of combating inflammation.

"6. As there are inflammations, or states of morbid hyperendosmose, which cannot be cured by the means above-mentioned, M. Dutrochet conceives that his theory points out a sixth method of cure. We know, says he, that fluids introduced into the organic tissue by endosmose expel those which already exist in it; so that, in a state of morbid hyperendosmose caused by a chemical change of the fluids, if we can introduce into the organic tissue chemical fluids capable of producing a greater hyperendosmose than already exists, the matters causing this will be expelled by means of the increased activity of the endosmose. In this manner cantharides and many other acrid matters prove useful; and mercury cures syphilis. To this principle also, without our author being aware of it, may be referred the cure of syphilis without mercury, by simple dilution and rest, as has been lately practised. The acrimony of the virus is gradually lessened, the energy of the endosmose diminished, and the disposition to the formation of the morbid state of the fluids, which had been induced by the introduction of the virus, is overcome by the restoration of the milder state of the secreted fluids, selected from the nutritive juices.

"7. The intensity of the hyperendosmose may be diminished by the introduction into the economy of certain causes of *exosmose*. Acids, in general, are of this description, and it is probably this property which renders acidulous beverages so useful in inflammations. On the contrary, M. Dutrochet regards solutions of gum, of extract, and of sugar hurtful, as being productive of endosmose. If emollient cataplasms produce a beneficial effect, when applied to inflamed parts, it is to be ascribed, according to our author, to the fluid being absorbed, and favouring exosmose: and he is of opinion that baths can be useful only as the liquids used for forming them are more or less dense than the organic fluids, depending on the nature of the disease.

"M. Dutrochet having concluded his remarks on inflammation, commences the consideration of the advantages resulting from the application of his theory to animal *absorption* and *exhalation*. He objects to the theory advanced by M. Majendie, that absorption is the simple result of capillary attraction: and then proceeds to prove, that absorption is the result of endosmose; and that elective absorption depends altogether upon the relation of the fluids exterior to the organic tissue and those contained in it. Thus, in the intestines, chyle is absorbed, but fæcal matters are rejected, because, as his experiments have proved, fæcal matter is an agent productive of exosmose, while chyle possesses the opposite property.

"'If then the chyle possesses such qualities as fits it to be absorbed by the organic tissue, for the same reason the fecal matter possesses qualities which cause it to be rejected.'—p. 214.

"The mucous membrane of the intestines is a chemical filter, that permits those substances only which are endowed with certain chemical qualities to pass: but although this is a species of secretion, yet it is merely a separation of mixed substances; similar, for example, to the secretion of urea by the kidneys; for it is well known, from the experiments of M. Prevost and Dumas, that urea exists ready formed in blood: whereas many secretions are the result of a separation and a new combination of the elements of the nutritious fluid. The general theory of secretion of vegetables is applicable to animals: and the organs employed in this function, like those of vegetables, are hollow sacs or cells, through the sides of which the secreted fluid is introduced. This is manifest in insects and the mollusca, the secretory organs of which are composed of a congeries of vesicles, among which the blood-vessels and the excretory canals ramify. The sides of these vesicles are true chemical filters, which, under the influence of an electrical current, transmit, whilst at the same time they modify, certain elements of the nutritive fluid. The secreted fluid is expelled, in the natural state, towards the excretory canals; but, if these be obstructed, it passes into the blood-vessels, thence result certain morbid accidents. In this point of view, nutrition itself is a modification of secretion: the nervous vesicles secrete the nervous matter which fills them, and the muscular vesicles that substance to which they owe their peculiar vital properties. 'Each of these vesicles expel at the same time substances previously secreted, and these fall into the blood-vessels, the only excretory vessels of secretion and nutrition.'—p. 217.

"M. Dutrochet conceives, with much truth, that there is no continual waste and renewal of the solid parts, as is generally supposed; and adds, 'if the containing parts renewed themselves continually, like the contained parts, it is probable that death from old age would never happen, since the living being would never be old.'—p. 218."

7. *On the Absorbents in Fishes.* By Professor Fohmann.—More than half a century has elapsed since the discovery of the absorbents in birds, reptiles, and fishes, by Monro and Hewson, and during that period our knowledge on the subject, has made but very slender advances. Professor Fohmann, recently of Heidelberg, now of the University of Liege, has recently been investigating the absorbents in fishes, and he has not only discovered them in many of this class in which their existence had not previously been demonstrated, but has also given in a late work, (*Das Sangadersystem der Fische,*) a more accurate account of them than has ever hitherto been published.

Monro and Hewson state that the absorbents terminate or rather originate by open mouths; Professor Fohman, after giving good grounds for doubting the accuracy of the observations of the former, and showing the fallacy of the experiments of the latter, states "that he never could discover open mouths in the absorbents of the torpedo and sea-wolf, in whom those of the mucous membrane of the intestinal canal can be seen and accurately examined by the naked eye; and as little could he find them in those of other species of this class of animals. He states that these vessels in fishes invariably terminate in blind extremities, *en cul de sac,* at this place constituting tubes of greater diameter than they do a little further from their commencement—i. e. in their course towards the centre of circulation; and that, in most parts of the body, they here represent pouches or dilatations, which have an internal smooth surface, and an external one having more or less resemblance to the appearance of cellular substance.

"It is known that in fishes the absorbents have no valves, with the exception of the places where they terminate in the venous system, and also that there are no absorbent glands. These vessels, however, do not preserve a continuous vascular character throughout their course. Having preserved this for a short distance, they suddenly increase in size, run together, and either constitute or terminate in sacculi or plexuses. The internal surface of these sacculi or plexuses does not present a smooth surface, but a rough irregular one of filamentous, membranous, or cellular substance-like projections; so that what externally appears as one simple sac, is divided internally into several by these lamellæ, (*blätchen.*) This is readily seen in the absorbent sacculi, (*sangadersäcken,*) in the vicinity of the stomach and intestinal canal of the eel, and in the absorbent plexuses, (*sangadergeflechten,*) of the stomach of the torpedo. These absorbent sacs and plexuses, which are not confined to the class of fishes, but are met with in the amphibiæ, are parts well worthy of notice and consideration.

"On the subject of the communication between the absorbents and veins, our author observes, that those who have assumed such a communication to exist, do not seem to have bestowed sufficient time on their investigations, and have not gone to work with the caution and precision which this very difficult subject requires. He instances the observations of Lippi* as being particularly liable to this objection, and not at all to be depended on; in truth, they are full of error. The observations of the Italian are asserted to have been founded on examination of the absorbents in man, the horse, and the goose. He represents a connexion as existing between the extremities of the absorbents and extremities of the veins, like that between the capillary arteries and veins, the one kind of vessel passing into, or rather continuing itself into the other. Fohmann, after the most numerous and successful injections of the absorbents in man and the mammalia, has never seen this communication. The circulating system forms a shut circle; the only communication between absorbents and veins is that where the absorbent opens through the coats of the vein, *insertio lateralis;* all communication between capillary vessels is *insertio terminalis*—the transition of the extremity of an artery into the commencement of a vein. Lippi has represented the absorbents as communicating by means of greater or smaller twigs, branches, and trunks, with the venous system, and that out of the limit of the absorbent glands, those twigs, branches; and trunks opening directly into the vena cava, the internal pudic and emulgent veins, and the vena azygos. Fohmann asserts that, in man and the mammalia, a communication between the veins and absorbents only takes place in the absorbent glands; and that none exists by means of such large vessels, or out of the absorbent glands, as stated by Lippi, who, in fact, has taken veins for absorbents. In the animals in whom absorbent glands do not for the most part exist, in fish, amphibiæ, and birds, we can observe the communication between the absorbents and veins, in different parts of the body, with the naked eye. The absorbents which Lippi represents as proceeding from the under part of the intestines of the goose into the renal vein, are the vessels of whose connexion with the renal or sacral vein Fohmann gives an account in his small work published six years ago.

"A curious circumstance discovered by our author in certain fishes, is that the contents of the absorbents are not all poured directly into the venous system. In the eel, for instance, a branch goes off from the trunk of the absorbent system, representing the thoracic duct, towards a small receptacle in the vicinity of the gills. Out of this globular receptacle proceeds a vessel, which divides into branches; these branches are distributed to the gills, in the same way as those of the pulmonary artery, and from their extremities are returning vessels, which bring back the lymph, in the same way as the pulmonary veins return the blood; the trunk formed by these branches opens into the thoracic duct immediately before its termination in the jugular vein."—*Lond. Med. and Phys. Journ. Oct.* 1827.

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8. *On the Gastric Juice.*—"The *Gastric Juice,* which has been made so frequently the subject of inquiry, and with such discordant results, has been examined anew, both by Leuret and Lassaigne, and by Tiedemann and Gmelin; and our information as to its properties and agency in digestion has in consequence been rendered much more precise. Under this head the most extensive and valuable researches unquestionably appear to be those of Tiedemann and Gmelin.

"MM. Leuret and Lassaigne allege they have invariably found the gastric juice to be acid; they state its component parts to be water, hydrochlorate of ammonia, chloride of sodium, mucus, an animal principle soluble in water, phosphate of lime, *lactic* acid; and they impugn the accuracy of the experiments of Dr. Prout, who, it is well known, was lately led to infer that the free acid evolved during digestion is the hydrochloric.

"The Heidelberg physiologists, on the contrary, inform us, that if the contents of the stomach be examined after a long fast, and without any stimulus being applied to its villous membrane, the fluid found in it is a clear, ropy, faintly-opaque liquid, which is almost or entirely destitute of acidity. But if any stimulus, even of the simplest kind, is applied to the inside of the stomach, then the fluid secreted is uniformly acid, and the degree of acidity appears to be proportional to the degree of the stimulus. Pure gastric juice they found to be best procured by making animals swallow quartz pebbles after a long fast, and killing them in an hour. It was generally grayish-white, ropy, and decidedly acid. It contained, as procured from the dog and the horse, some mucus, osmazome, and salivary matter, alkaline sulphates and hydrochlorates, the alkali being chiefly soda, phosphate and muriate of lime, other salts in minute proportion; and the acidity was owing to the *hydrochloric and acetic acids* in the dog, and to these conjoined with the *butyric acid* in the horse. That part of their chemical inquiries which regards the free acids seems to have been conducted with great care; and certain criticisms of Leuret and Lassaigne have given occasion to an appendix, consisting of a defence of themselves, and of Dr. Prout, which we cannot help thinking is quite satisfactory. As the lactic acid of Leuret and Lassaigne is now acknowledged by Berzelius to be a variety of the acetic, all parties may be understood to be agreed as to the existence of that acid in the gastric juice. The researches of Prout, Children, and Graves, confirmed as they have been so amply by Tiedemann and Gmelin, likewise establish the presence of the hydrochloric acid. The existence of the butyric is more doubtful.

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* Illustrazioni Fiscologiche del Systema Linfatico-chilifero Mediante la Scoparta di un gran summo di Communicazioni di esso col Venoso; del Prof. Regolo Lippi, Firenze, 1825, 4.

"When the secretion of the gastric juice is elicited by its natural stimulus, food of various kinds, it has been remarked by Leuret and Lassaigne, as well as by Tiedemann and Gmelin, that the chymous mass is invariably acid, and that its acidity is owing to the acids mentioned above; and Tiedemann and Gmelin farther maintain as the result of their experiments, that its acidity is greatest when the food is most difficult of digestion. In dogs and cats the greatest acidity was remarked when they were fed with coagulated albumen, fibrin, bones, gristle; it was less when they were fed on starch, gelatin, potatoes, rice; and when they were fed with liquid albumen, the alkalinity of the food was nearly sufficient to neutralize the acidity of the gastric juice. The quantity secreted during digestion seems to be very great; Leuret and Lassaigne having found, that when the gullet of a horse was tied so as to prevent the secretions of the mouth and gullet from entering the stomach, a full meal of oats became completely saturated with juice in four or five hours.

"So much with regard to the nature and composition of this fluid. Its power of dissolving the food has likewise been made the subject of experiment by the Parisian and by the Heidelberg physiologists; and they agree in confirming the statements of Spallanzani, Stevens, Grosse, and others, and in contradicting the later results of Montégre, who imagined he found that the gastric juice does not act out of the body, and whose opinion has since regulated that of the French school generally. MM. Leuret and Lassaigne remarked that the fluid procured by long sponges from the stomach of a duck while fasting, when kept upon bread crumbs at a temperature of 88° Fahr. soon divided them into minute particles, and formed with them a homogeneous mass precisely like chyme; and that when flesh was mixed with the gastric juice of the dog, it was quickly softened and lost weight. The observations of Tiedemann and Gmelin are more detailed. The fluid found in the stomach of the dog during the digestion of bones and coagulated albumen was made the subject of experiment, and comparative observations were made with water and with milk. Various kinds of food were tried, such as bread, coagulated albumen, raw flesh, boiled flesh; and in every instance it was observed that the bread was broken down in the course of eight or ten hours into a pap, and the surface of the beef and of the albumen was converted into a pulp, which could be easily scraped off. It is evident that Montégre failed in procuring similar results, because the fluid with which he operated was not gastric juice, secreted in consequence of the application of some stimulus to the stomach, but a mixture of saliva, the mucus of the gullet, and the fluid which Tiedemann and Gmelin found in the stomach while empty of food and not stimulated.

"The solvent power of the gastric juice, therefore, is now placed beyond all question. It is only the German experimentalists who have thought of trying whether this property is accounted for by the composition of the fluid; and of attempting to accomplish, by means of the simple substances contained in the gastric juice, the same solution or digestion which is effected by the gastric juice itself. Their experiments, however, are not complete. They have remarked, that dilute acetic acid, dilute hydrochloric acid, a weak solution of acetate of ammonia, and a solution of hydrochlorate of ammonia, severally dissolve more or less of most animal substances which are used as articles of food. They have not tried their effects conjunctly, as they exist in the gastric juice.

"Although these experiments, however, are not satisfactory, no doubt can exist that the gastric juice possesses the power, as a mere chemical agent, of effecting the solution of a great variety of kinds of food. Whether this chemical property is, with the aid of the churning action of the stomach, sufficient for effecting the process of chymification, remains now to be considered. The mucous crypts of the stomach evidently pour out an abundant mucus; but it is probable that this only serves for lubricating the stomach and food, and perhaps for diluting it. It is impossible, indeed, to collect the mucus of the stomach, so as to ascertain whether or not it possesses also the power of dissolving vegetable and animal matter: but this certainly appears improbable. The bile has no share, as has been imagined by some physiologists, in converting the food into chyme. According to the late experiments of Brodie and Mayo, and those presently to be mentioned of Leuret and Lassaigne, and of Tiedemann and Gmelin, chymification goes on perfectly in animals fed after the biliary duct has been tied. There is no other apparent agent, therefore, in the process, except the gastric juice and the muscular action of the stomach. It appears to us, however, that the question should have been set at rest by subjecting the food during artificial digestion to a process of churning, equivalent to that to which it is subjected by the stomach, and then comparing the chemical changes which take place with those produced on the principles contained in the food after they have been subjected to natural chymification."—*Ed. Med. and Surg. Journ. October*, 1827.

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9. *On the uses of the Bile.* By Professors TIEDEMANN and GMELIN.—Professors Tiedemann and Gmelin, conceive, in the first place, that the bile by its stimulant properties "excites the flow of the intestinal fluids, which is clearly proved to be the case by the unusual dryness of the feces in jaundiced persons, and in animals whose duct has been tied. In the next place, it probably stimulates the intestinal muscles to action. In the third place, considering the abundance of highly azotized principles it contains, it probably contributes to animalize those articles of food which do not contain azote. Fourthly, they believe it tends to prevent the putrefaction of the food during its course through the intestines, because when it is prevented from flowing into them their contents appear much farther advanced in decay than in the healthy state. Fifthly, as already mentioned, it probably tends to liquefy and render soluble the fatty part of the food. But, lastly, they are disposed to consider it also as an important excretion.

"The arguments by which they endeavour to support this opinion, and more particularly to prove that it is supplementary to the function of the lungs, are ingenious, if not conclusive. They first show, from the relative size of the *vena portæ* and hepatic ducts, from the more intimate connexion of the biliary capillaries with those of the *vena portæ*, than with those of the hepatic artery; and, finally, from the experiments of Malpighi, recently confirmed by those of Simon—that the bile is a secretion from venous, not from arterial blood. They next prove that a great number of the principles of the bile, such as its resin, colouring matter, fatty matter, mucus, and salts, are thrown out of the body with the feces, in the natural state of the biliary system, or by the urine, and into the cellular tissue, when the excretory duct of the liver is obstructed. These principles all contain a large proportion of carbon, and would appear, therefore, to be intended to carry off the excess of that element which is introduced into the system with the vegetable part of the food, and which is not thrown off by the lungs. In the lungs it is thrown off in a state of oxidation; in the liver it is thrown off chiefly in union with hydrogen, as in the form of resin and fatty matter. That the bile is thus intended to assist the lungs in decarbonizing the blood appears, they conceive, from the following facts. The resin of the bile abounds most in herbivorous animals, whose food contains a great disproportion of carbon and hydrogen. But, what is of more importance, the pulmonary and biliary organs are in different tribes of animals, nay, even in different individuals of the same species, in a state of *antagonism* to one another. The size of the liver and the quantity of the bile are not proportionate to the quantity of food and frequency of eating; but inversely proportional to the size and perfection of the lungs. Thus, in those warm-blooded animals, which have large lungs, and live always in the air, the liver, compared with the body, is proportionally less than in those which live partly in water. The liver is proportionally still larger in reptiles which have lungs with large cells, incapable of rapidly decarbonizing the blood—and in fishes, which decarbonize the blood but slowly by the gills—and above all, in molluscous animals, which effect the same change very slowly either by gills or by small imperfectly developed lungs. It is also worthy of remark, that the quantity of venous blood sent through the liver increases as the pulmonary system becomes less perfect. In the mammalia and in birds the *vena portæ* is formed by the veins of the stomach, intestines, spleen, and pancreas; in the tortoise it receives also the veins of the hind-legs, pelvis, tail, and the *vena azygos;* in serpents it receives the right renal, and all the intercostal veins; in fishes it receives the renal veins, and those of the tail and genital organs. Farther, during the hybernation of certain animals of the class mammalia, when the respiration is suspended, and no food is taken, the secretion of bile goes on. Another argument is drawn from the physiology of the fœtus, in which the liver is proportionally a great deal larger than in the adult, and in which the bile is secreted abundantly, as appears from the great increase of the meconium during the latter months of utero-gestation. The last argument is drawn from pathological facts. In pneumonia and phthisis the secretion of the bile, according to the observations of our authors, is increased; in diseases of the heart the liver is enlarged, and in the *morbus cœruleus* the liver retains its fœtal state of disproportion. In hot climates, too, where, in consequence of the greater rarefaction of the air, respiration is less perfectly carried on than in colder climates, a vicarious decarbonization is established by an increased flow of the bile."—*Ibid.*

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10. *On the Chyle.* By Professors Tiedemann and Gmelin.—"Chyle is now well known to consist of a serous and a fibrinous part, the latter of which separates like that of the blood by spontaneous coagulation. The firmness of the coagulum seems to depend chiefly on the quantity of fibrin. Chyle hardly coagulates at all before it has passed through the mesenteric glands. After passing through them, the fibrin begins to appear, and it is much more abundant after the addition of the lymph from the spleen, which contains a very large quantity of fibrin. The quantity is considerably lessened in the chyle of digestion; and it is increased in the chyle formed after the ligature of the *ductus choledochus.* It abounds in the lymph from the lower extremities. In like manner the chyle before passing the mesenteric glands contains no red particles; but it does immediately afterwards, and more particularly after it is mixed with the lymph from the spleen, which abounds with them as with fibrin. These particles are also, like the fibrin, very much diminished in the chyle of digestion, and proportionally to the nutritiveness and digestibility of the food. They are increased by tying the choledochus duct. They abound in the lymph

of the lower extremities. The chyle frequently contains fatty matter—very little or none, however, if the animal is fasting, or has fed on food which does not contain fat—and most when the food is very fatty, when, for example, butter is mixed with it. The fatty matter is not dissolved, but exists merely in a state of minute division and suspension, giving to the chyle its peculiar white colour; for the colour is removed, and the chyle rendered limpid by ether which carries away the fatty particles. There is no fatty matter in the lymph of the lower extremities; it is much less abundant in the thoracic duct than in the chyle before it passes through the mesenteric glands, and it hardly exists in the chyle at all when the ductus choledochus is tied. The serum of the chyle is very generally alkaline; in two instances only, was it found neutral, namely, in a dog fed on fibrin, and in a sheep fed on oats. Its solid contents differ in the chyle of fasting animals and in that of digestion. In the horse while fasting the solid part of the serum consists on an average of 76.2 per cent. of albumen, 6.7 of animal matter soluble in water, and 16 animal matter soluble in alcohol; but after digestion of 61 albumen, 3 animal matter soluble in water, 34 animal matter soluble in alcohol, of which twenty parts were fat. Our authors were not able to decide whether the total amount of solid matter in the serum is increased or diminished during digestion."—*Ibid.*

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11. *Superfœtation.*—A mare, five years old, was delivered at intervals of a quarter of an hour, first of a horse and then of a mule. She had been covered by a horse and five days afterwards by an ass.

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12. *Nourishment by Clysters.*—Sir Astley Cooper mentions that he knew a lady who had a stricture in her œsophagus, who was supported forty-five days by clysters of broth and wine, when she could not swallow even a drop of water.—*Lectures on Surgery*, *Vol. III.*

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13. *Metastasis of Erysipelas of the Head, to the Serous Membrane of the Heart.* By Robert Adams, Esq.—Mr. Adams thinks that there can be no doubt that erysipelas affects the heart. He has, he says, seen two cases of erysipelas of of the head and face which terminated fatally by metastasis to the heart. "In one, the erysipelas succeeded to a wound in the head, in the other, it came on spontaneously. In both, as soon as the external redness receded, the breathing became distressed; the countenance agitated, and rest in the horizontal position impossible. Yet the general symptoms of pericarditis were so obscure, as to excite no suspicion in the mind of the attendants as to the real nature of the case. Both were weak and debilitated patients, in which this affection supervened towards the close of a long illness: neither lived more than two days after the sudden disappearance from the surface of the erysipelatous redness. The countenance, the breathing, the state of the pulse, and apparent debility in both, seemed to forbid any active interference on the part of the medical attendants, who had no suspicion of the real nature of the case, (so obscure were the symptoms of pericarditis,) until the examination of the body disclosed it. The pericardium contained some turbid fluid, but had contracted no adhesions to the heart. A quantity of lymph, evidently recently effused, lined the concavity of the pericardium, and thickly and unequally covered the surface of the heart itself: appearances which left no doubt as to the immediate cause of the death of these individuals. The late Mr. Thomas Roney and Mr. Cusack met with similar cases; and the latter preserves a specimen of the morbid appearances which the dissection of a similar case presented, in the museum in Park street."—*Dublin Hospital Reports*, *Vol. IV.*

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14. *Case of Conception with Closure of the Vagina.*—Professor Rossi relates the case of a married woman, who was attacked with violent abdominal pains. On examining the patient, he found that the external organs of generation were entirely wanting, that there were no hairs on the mons veneris, and that there

did not exist any signs of puberty. He therefore could not entertain the idea of her being pregnant, but attributed the pains to there not existing any passage for the discharge of the menses; he therefore opened an artificial passage for them by making an incision three inches long in the direction of the vagina, and, on introducing his finger, he ascertained that the woman was really in labour. He enlarged the incision a little and the woman was delivered of a live male fœtus. M. Rossi prevented the new-made vagina from closing by introducing into it a piece of intestine which he then distended with air. This vagina afterwards admitted the introduction of the penis, and two years afterwards the woman was safely delivered of a second child. As M. Rossi thought it impossible that the patient could conceive without there existing any external communication, he inquired of the husband, and discovered near the sphincter of the anus at its internal part, a very small opening, which would scarcely admit a very fine probe, and communicating with the artificial vagina. —*Memorie della Reale Acad. delle Sc. di Torino,* Tomo xxx.

15. *Causes of Monstrosities.*—M. Velpeau has read to the Philomathique Society of Paris a memoir on this subject. He is of opinion that in a great number of cases, the monstrosity is the result of disease of the embryo, and particularly that the formation of two acephalous fœtuses which he presented could not in any other way be explained. The first was perfect except the cranium and brain, which were wanting, and bore evident traces of disease; the second was a mere trunk, the head, neck, and all the extremities being absent, and Mr. V. thinks that nothing could better explain the deficiency of the members than the supposition that they had been destroyed by gangrene. M. Larrey observed that this opinion of the causes of monsters is not new; that it prevails in Germany; and that there is at Berlin a valuable collection, which appears strongly to confirm the belief that monsters are the result of different diseases in the fœtus.—*Bulletin des Sciences Médicales, Aout,* 1827.

PATHOLOGY.

16. *Clinical Report on the State of Fever.* By M. Bally.—It is, says M. Bally, "by connecting morbid phenomena with the local lesions on which they depend or are connected, that the moderns have arrived at exact knowledge of those grave and complex affections to which the ancients have applied the vague terms of putrid, malignant, nervous, and adynamic fevers, which are in reality veritable *gastro-enterites* degenerated, or as they are more properly and precisely termed by M. B. *ileo-diclidites,* signifying *inflammation of the ileum and upper surface of the valve of the colon,* the parts most commonly affected in fevers. In examining the cases of fever detailed by various authors, and by Pinel among the rest, he considers it impossible not to conclude that the majority laboured under that state of the intestinal canal so well described by Broussais and his disciples. Those who have taken the pains to open many bodies after death by fever, afford innumerable proofs of the phenomenon in question, though they looked upon the disease as a concomitant or consequence rather than a cause of fever. In short, says he, if we compare the descriptions of putrid and malignant fevers, as handed down to us, with those of the gastro-enterites of the present day, we cannot but be struck with the resemblance. All allow that inflammation of the mucous membrane is a very common *attendant* on fever—and for his own part, M. Bally believes it to be the disease itself, or at least the first and principal lesion in fever.

"The fevers of the last quarter of 1826 have tended to confirm M. Bally in the truth of this doctrine; and what is more, they have enabled him to make some distinctions not hitherto much noticed, and to adopt an important and successful method of treatment.

"Scarcely had intermittents begun to subside, when inflammations of the digestive tube became prevalent. Some of them were hæmorrhagic, and terminated fatally in a very prompt manner. The greater number, however, assumed a low or typhoid type. These forms were more dangerous in proportion, as they succeeded early to the intermittent epidemic; and M. Bally conceived that there was an intimate connexion between the two epidemics, especially as the gastro-enterites frequently assumed a quotidian intermittent character. When this was the case, the antiphlogistic treatment did not succeed, and the sulphate of quinine was effectual. The state of adynamia, which often supervened in the course, or towards the close of the fever, did not appear to result from any primitive debility of the subject, or as consecutive of gastro-enteritis; but it seemed often to depend on the lesion of some other organ, over which the antiphlogistic treatment had not effectual control. The rigidity of the limbs, the tremors, the subsultus tendinum, the throwing back of the head, the delirium, the ramblings, the loquacity, the difficulty of expanding the chest—all these functional disorders, says our author, were far from constituting the debility. They showed themselves during the existence of the most acute irritation, and they subsided with it under a very active system of depletion. They must, therefore, have depended on disorder of some particular organ.

"M. Fodera considers the superior portion of the spinal marrow as the principal seat of affections truly adynamic; and our author partakes of the same opinion. He thinks this is confirmed both by experiments and by pathological anatomy. The above portion of spinal marrow has been often found softened in the dead body by our author, M. Bally. Stoll, whose authority is good on all points of practical observation, long ago remarked that putrid fevers did not always infer fevers of debility. He was somewhat astonished to find that bleeding and other evacuations cured the disease better than tonics. The oppression and the prostration of muscular power, although different in their nature, acknowledge the same cause. 'The first results from congestion; the second from inflammation of the spinal marrow.' Bleeding, he observes, is more effectual in relieving the former than the latter condition of parts. 'Thus, in the beginning of all adynamic fevers, the symptoms which constitute debility are owing to congestion or inflammation of the spinal marrow, either primitive or consecutive of gastro-enteritis.' We agree with our author that great errors are daily committed by pathologists in considering that there can be no *disorder* in a part during life, if no trace of change of structure be discernible after death. The organization of the brain, nerves, and their investing membranes, is so very delicate, that disorder of function sufficient to destroy life every day occurs, without alteration of structure. Hence the necessity of taking into consideration the symptoms, as well as the *post mortem* investigations.

"Numerous dissections, made with the greatest care, have convinced M. Bally that inflammation of the lower portion of the small intestine, and upper surface of the ileo-cæcal valve, constitutes the first period of what are termed putrid or typhus fevers. If this inflammation be checked by nature or art, the subsequent symptoms of debility or putrescency do not occur. If not, the disease proceeds to ulceration or destruction of the mucous membrane. It is very rare to find any alteration of structure in the duodenum, jejunum, or colon. The cæcum itself is seldom affected, although the upper surface of the valve is so generally implicated in the disease. What can be the cause of this locality of the disease in the part above mentioned? M. Bally attributes it to the difference of acrimony in the contents of the small and of the large intestines. Nature, he says, is sometimes equal to the task of curing these ileo-cæcal inflammations, and in one instance this was effected by a profuse nasal hæmorrhage.

"The division of the disease into two stages or periods, is not only philosophic, but of great importance in a therapeutic point of view. In the first period, or that of inflammation, the antiphlogistic treatment may arrest the progress of the disease, and prevent the degeneration of the fever into the putrid or ulcerative form. But this disease, though so formidable and fatal in its advanced stages, does yet commence in so insidious a manner, that the patient is not soon enough alarmed, and is seldom sent to an hospital till after the first or second week, when the local affection has made great head, and when the constitutional symptoms veil those of the primary topical affection. As soon as the symptoms indicate that the inflammation is passing into the state of ulceration, M. B. thinks it is necessary to abandon the antiphlogistic treatment, as far as sanguineous depletion is concerned, and to have recourse to powerful counter-irritation, so as to attract to the surface that morbid excitement which is going on internally. He does not, however, employ blisters for the purpose of counter-irritation. He has not seen advantage arise from their application in ileo-diclidites, but on the contrary, disadvantage, from the property which the lytta has of causing irritation in the internal tissues. Mustard cataplasms have produced much better effects in the way of revulsion, when the brain or other organ was sympathetically affected. But he seems to place his principal dependence on a plentiful crop of pustules, brought out by tartar emetic in the umbilical region. He has never seen any reason to conclude that the antimony is absorbed on these occasions. M. Bally employs a tartar emetic plaster rather than ointment, to the abdomen, it is far less troublesome, and far more powerful than the unctuous frictions. He sometimes applies a dozen of leeches to the part, and as soon as these animals fall off, he places a Burgundy pitch plaster, well powdered with tartrate of antimony, over the leech bites. In less than forty-eight or sixty-four hours, a plentiful crop of pustules is elicited, each pustule surrounded by an areola of inflammation. If any species of counter-irritation can relieve the internal malady, this will do the business. In very grave cases, M. Bally employs an antimoniated drink for several days in succession, with the view of copiously evacuating the acrimonious contents of the small intestines, which prove a powerful source of internal irritation.

"'Finally,' says he, 'when quotidian exacerbations, analogous to the periodical accessions of an intermittent fever, become associated with the ileo-cæcal affection, the sulphate of quinine is to be exhibited, notwithstanding the redness of the tongue, the abdominal pains, the diarrhœa, and the various other signs of inflammation of the mucous membrane of the intestines.'"

M. Bally has given a number of cases illustrative of the doctrine which he maintains, and he considers them as proving that the peculiar inflammation and ulceration seen in these fevers, is not a common gastro-enteritis—the stomach being rarely affected, and that only secondarily—but an *ileo-diclidite,* or affection of the ilium and superior surface of the valve of the colon. M. B. dwells on the importance of recognising this pathology of the disease, if it be correct, as it will tend to restrain the routine practitioner from throwing in stimulants and tonics at an early stage of the disease, from dread of debility, and induce him to use proper depletion and cooling aperients, in order to prevent the ulcerative stage, that may otherwise ensue.

We have space for only one of the cases related by M. Bally in illustration, and we select a fatal case in order to show the appearances on dissection—cases of a similar description will be found in the report of our coadjutor Dr. Jackson, in the present number of this Journal, and we may further remark that the post mortem examinations at the Alms-house infirmary of this city, have shown the great frequency of ulcerations near the ileo-cæcal valve in fevers.

CASE. "Etienne, aged twenty-seven years, entered the hospital Cochin on the 11th of October, stating that he had been ill a fortnight. He had passed the whole of a day in a damp cellar occupied in hard labour, and from this he dated his illness, which commenced with shiverings, cephalalgia, pains in his limbs, &c.—the shiverings coming on regularly in the evenings. He had taken plenty of hot wine and bouillon. 16*th day.* Face flushed—tongue coated in the middle, and red at the sides—thirst urgent—abdomen not tender—diarrhœa—pulse high, hard, and frequent—skin covered with perspiration. *Lemonade with gum—fifteen grains of sulphate of quinine in the twenty-four hours.*

17*th.* The same accession of symptoms in the evening—the same treatment. 18*th.* Delirium was added to the evening paroxysm, with watery diarrhœa—eighteen grains of sulphate of quinine. 19*th.* The evening accession was only known by a strong excitement of fever, the skin being moist. The sulphate of quinine suspended. 20*th day.* Tongue very dry and red—much alteration for the worse—pulse strong and frequent. 21*st day.* Delirium—decubitus dorsalis—nausea—pulse 90. 22*nd day.* Not much delirium, but great prostration of strength—tongue and lips fuliginous—abdomen distended. 23*d day.* Somnolency—head drawn backwards—subsultus tendinum—involuntary defæcation. The patient lingered on till the 38*th day*, when he became affected with tetanic rigidity throughout the whole body, and, in a few days more he expired.

"*Dissection.*—The colon and the abdomen, in general, were distended with gas. The mesenteric glands were enlarged and inflamed—coats of the stomach red, but not softened—duodenum contained a yellowish matter—internal surface of the ileum covered with innumerable ulcerations of various sizes, but increasing in number as the valve of the colon was approached. The mucous membrane in the interstices was much thickened. The liver and spleen were enlarged. There were various traces of inflammation and effusion in the brain and its ventricles, as well as in the spinal marrow. The latter was softened for the space of two inches opposite the sixth cervical vertebra, and also there was a softening abreast of the first vertebra, (counting from below,) extending down towards the 8th dorsal vertebra. There was no other lesion of any consequence in any part of the body."—*Medico-Chirurgical Review, from the Journ. Gén. de Médecine.*

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17. *Cancer of the Cardia.*—"A lady, aged about 40, became affected in the month of November, 1826, with common symptoms of dyspepsia, and her complaint was considered as such by her medical attendants. In the beginning of 1827, the patient began to complain of some difficulty in swallowing solid food, and sense of nausea at the stomach after meals. These symptoms gradually increased to inability to swallow food, or rejection of the food undigested a few minutes after it was taken, by a species of regurgitation rather than vomiting. Mr. Brodie, Dr. Johnson, Mr. Andrews, and others were consulted, and the case was considered to be disease about the cardiac orifice of the stomach. Blisters, local bleeding, and various means were used, without arresting, in the slightest degree, the rapid progress of the disease. During the month of May, very little food could be got into the stomach, and constant pain was complained of in the region of the cardia. The patient was nourished principally by enemata. In the beginning of June, she spat up, rather suddenly, a bloody kind of offensive matter, and all at once she acquired power, not only of swallowing, but of retaining the food. She now took a good deal of nourishment, and some faint hopes were entertained of recovery. But the discharge from the œsophagus increased in quantity, and became deteriorated in quality—the fever wasted the patient—the thirst was constant—bad matters were passed by stool—the stomach again rejected food, and death put an end to her sufferings towards the end of June. The dissection was carefully made by Mr. Howship, in the presence of Dr. Johnson, Mr. Andrews, and Mr. Carrick, of Kensington. The lower portion of œsophagus, where it enters into the stomach, was in a state of open or ulcerated cancer, for the space of about three inches. A communication had taken place with the right cavity of the chest, in which was found some sanious effusion, and a considerable portion of lung, contiguous to the original disease, was disorganized and broken down. The stomach itself, and intestines were sound.

"This disease was remarkable for the rapidity of its growth. Nine months previous to its fatal termination, the lady was in perfect health. In this respect, disease of the cardiac orifice of the stomach forms a striking contrast with that which affects the pyloric orifice. Where pyloric disease takes place, the food gets readily enough into the stomach—digestion goes on—and some chyme passes into the duodenum till the last. Emaciation is slow and progressive, and vomiting is a pretty constant symptom some hours after the food is taken into the stomach. Where the cardia takes on disease, on the other hand, the food is, in a great measure, prevented from getting into the stomach, and is regurgitated rather than vomited. The system is deprived of nutriment, and death soon closes the scene."—*Medico-Chirurg. Review, Oct.* 1827.

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18. *Disease of the Liver.*—"A gentleman of very social habits, but by no means intemperate, had complained for some years of occasional uneasiness in the epigastrium, with slight symptoms of dyspepsia. Only three months before his death he was in his usual state of health, and presided at a public dinner. He had, however, an eruption on his face, which he was anxious to have removed, and for that purpose, put himself under the care of Mr. Macilwain, and Mr. Brookes, of Lambeth. Mr. M. put the patient on a reduced scale of diet, consisting of a considerable proportion of vegetables, and gave some mild alterative and aperient medicines. By these means the eruption entirely disappeared from the face; but now a new train of symptoms occurred. Some fulness appeared just under the ensiform cartilage, attended with pain, and dyspeptic phenomena. For these symptoms, leeches were applied, and the usual remedies prescribed. But the fulness quickly increased, and Dr. Cholmely's attendance was had, in addition to that of the two other medical gentlemen. The epigastric swelling, however, made rapid progress, and it was soon discovered that the edge of the liver could be clearly traced extending from one hypochondrium to the other, considerably below the margins of the ribs. The biliary secretion was now considerably deranged—the countenance was sometimes tinged yellow—a sickly sallowness took place—much gastric irritability prevailed—and emaciation advanced. On the 14th July, Dr. Johnson was called in, in addition, and this was about ten weeks from the first appearance of epigastric swelling. There was now a large prominent tumour in the epigastrium, and the liver could be felt as low as the umbilicus, extending from one side to the other, with hard rounded edges. It was conjectured now that there was some morbid growth, probably of an hydatid, tuberculated, or fungoid nature, independently of the general enlargement of the liver, which might account for the large rounded prominence in the centre. Nothing could, of course, be done, but lessen the gastric irritability by anodynes and effervescing medicines, while motions were procured by aperients. The prominent symptoms were now paroxysms of severe pain along and under the edges of the enlarged liver, which pain was considered by the medical attendants as seated in the bowels, and not in the tumour itself. The unfortunate patient could only lie on his right side—he had constant fever—thickly coated tongue—thirst—loss of all appetite—very morbid secretions from the bowels—and loaded urine. His countenance was indicative of visceral disease. Sir Astley Cooper was now added, in consultation; but, alas! the disease was beyond the reach of art! The patient lingered till the 29th July, when he rather suddenly expired.

"Dr. Johnson and Mr. Brookes examined the body at eight o'clock the same evening. There was some serous effusion in the abdomen, which was principally occupied by an immense liver, or rather tumour of precisely the appearance of brain. Not a particle of the original natural structure of the organ could be discovered. All was a homogeneous encephaloid mass, in which neither vessel nor duct could be traced by the naked eye. This enormous encephaloid growth, (for it could hardly be called liver,) had pushed up the diaphragm before it, and reached to the very summit of the thorax on the right side, descending below the umbilicus. Extensive adhesions had glued it to the stomach, transverse arch of the colon, and other contiguous parts. In a groove on its concave surface was found the gall-bladder, containing a thin dark-coloured fluid bearing little resemblance to bile. There was no other disease worth mentioning."—*Ibid.*

19. *Diabetes Mellitus.*—A soldier, aged 40, was admitted into the Hospital of the Faculty of Medicine, of Strasburg, December 27, 1824. He had been affected with diabetes for three years previously, the cause of which was not known, but its progress was rapid, and "the patient was reduced to a state of marasmus. He had no pains in the region of the kidneys, nor could any lesion be discovered by external examination of the abdomen. The urine was copious and sweet—the appetite voracious—the thirst inextinguishable—tongue white and moist—pulse, temperature, and alvine excretions natural. The quantity of urine made each day amounted to upwards of 30 pints. Various remedies were used, without any impression being made on the complaint. The plan of Rollo was then tried. By the third day of this treatment, the quantity of urine was diminished to eight pints per diem, and a most abundant perspiration daily covered the surface. The qualities of the urine became nearly natural. But now the appetite failed, vomitings took place, constipation became obstinate, the thirst was still intense, febrile phenomena were developed, debility rapidly increased, and dyspnœa, with cough, were added to the other symptoms. The patient lingered out till the 10th March, 1825, seventy-two days from his entrance into the hospital, and then expired.

" *Dissection.*—There was nothing remarkable in the intestinal canal, except a few discoloured patches in the mucous membrane, which, in texture, was sound. There was also a very small ulceration of one of the mucous follicles in the lower portion of ileum, near the valve of the colon. No apparent change in the liver, spleen, pancreas, or kidneys. The vessels of these last were strongly injected. The ureters were dilated, and the urinary bladder was very capacious. Its coats were thickened, and their vessels and nerves strongly developed. In the chest, the morbid phenomena far exceeded the symptoms during life. There was hydrothorax in the left side—hepatization of the left lung, and, in its upper portion, a large cavernous excavation—universal adhesion of the right lung to the side, but its structure sound—hydro-pericardium—aneurismal dilatation of the pulmonary artery, two inches in diameter. There was no lesion in the brain or its membranes. The blood was every where fluid in the vessels, and mixed with air."—*Repertoire Generale, No.* 3.

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20. *Congenital Enlargement of the Heart.*—"Mr. J. was born in 1811, and was a sickly and feeble infant. When very young, he evinced a laborious state of breathing, and impeded functions of the heart and lungs. He spoke with volubility, but was often obliged to stop in the midst of his speeches, to take in breath. His lips were habitually of a blue colour, as well as the extremity of the nose, and the ends of the fingers. If he took any brisk exercise, he was soon panting for breath, and his heart in violent action. In this state he grew up—always in the doctor's hands—but never cured. It appears that he had several illnesses of an inflammatory character, for which he was bled, blistered, leeched, &c. It was observed that the *right* side of the chest was flattened in, and the *left* bulged out in the region of the heart. The left hypochondrium was also prominent. In short, it was evident that the functions of respiration and circulation were greatly disordered, but whether the structure of the heart and lungs was affected, was the question. At the age of puberty, all the symptoms above-mentioned became greatly exasperated, and in spite of various remedies, death put an end to the patient's sufferings.

" *Dissection.*—The left side of the chest seemed bulged out in the region of the heart, while the right side seemed depressed. The left arm was emaciated, the right was swelled. On opening the chest, they were astonished at the size of the heart. It occupied, in a great measure, both sides of the thorax! The pericardium contained about three ounces of water. The right auricle was prodigiously dilated, and its parietes attenuated. It contained a large quantity of coagulated blood, disposed in layers, and intermixed with fibrinous concretions. The pulmonary artery was dilated from its origin to its division into two branches, the right one of which was also dilated, while the left pulmonary artery was diminished, so that it would scarcely admit a probe. The ductus arteriosus was open, as in the fœtus, so as to give free communication between the pulmonary artery and the aorta. The foramen ovale was closed. The right ventricle of the heart was dilated and attenuated. The left ventricle and auricle were also greatly enlarged, but their parietes were proportionally thickened. What lung was left occupied the right side of the chest, and was gorged with blood. The left lung was reduced to almost nothing, and evidently performed no respiratory function. There was some effusion in the abdomen, and the liver was large and gorged with blood. The vena portæ and the vena cava were varicose.

"The narrator of the case, (M. Cogoreux,) thinks, and with great probability, that the heart was originally too large, and, consequently, pressed on, and ultimately annihilated the left lung—hence the enlargement of the pulmonary artery of the right lung. We see, in this case, two opposite conditions in the two sides of the heart. The right chambers were in a state of passive—the left, of active aneurism."—*Medico-Chirurg. Review, Oct.* 1827.

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21. *Case of Inflammation of the Arteries.* By RICHARD BRIGHT, M. D.—"On the 22d of May, 1812, a robust middled-aged sailor had his leg amputated below the knee, on account of a fungous tumour situated on the foot, and connected with the fascia plantaris. He was very irritable during the operation: he was afterwards obliged to have a catheter passed, and his pulse rose so much during the following day, that he was bled and put upon the use of nitre in his drink; after this he went on tolerably well, till the 27th, when he became very feverish, with obvious affection of the chest; a decidedly jaundiced tinge of the skin; and a most remarkable tenderness over the whole body, so that when his wrist was touched to feel his pulse, he immediately uttered a cry of complaint, and the same when any other part was pressed. He died on the 29th.

"Sectio Cadaveris.—On examining the stump it was found to be sloughy, a sinus extending about two inches along the popliteal artery. The artery itself near the part, and the femoral artery half way up the thigh, were internally of as bright a red colour as if they had been covered with arterial blood. The same appearance was distributed in patches throughout the other arteries which we examined; the arch of the aorta, and the aorta itself, the iliac and the brachial arteries; the colour, however, was in none so intense as in the femoral artery. The heart was natural; the pericardium loaded with fat. The lungs considerably gorged with blood; there was a small bony concretion in one lung. The pleura on the right side was healthy. The pleura on the left side, and particularly the portion lining the ribs, inflamed and covered with a thin coating of cream-like fluid exactly resembling pus: there was above a pint of fluid, like a mixture of serum and pus, in the cavity. The intestines were distended with flatus. The liver was rather hard, and in colour and appearance resembled the boiled liver of an ox. The gall-bladder adhered to the neighbouring intestines. The spleen soft. The pancreas natural. The kidneys firm, and of a light colour. I may here remark that I have seen the appearance to which I have alluded, in the arteries, and likewise in the lining membrane of the heart itself, in one or two other cases where death has followed severe operations, and where the patients have been peculiarly irritable; but where I do not know, that external tenderness had been noticed."—*Bright's Reports.*

22. *Case of Metastasis of Rheumatism from the Synovial Membrane of the Extremities to the Serous Membrane of the Heart.* By ROBERT ADAMS, Esq.—"A girl aged six years, was attacked severely with rheumatism, which engaged successively the principal joints, and showed itself in most of the muscles. Active measures, consisting of venesection, purgatives, together with the use of mercurials and the warm bath, proved successful. Convalescence was however slow. About three months after recovery from this attack " she became again afflicted with pain, swelling and redness of the ancle and knee joints; the least

motion was insupportable. There was great heat of skin, more particularly of the affected articulations; and remarkable frequency and hardness of the pulse, a loaded tongue, anorexia, in short, a combination of symptoms denoting high inflammatory action; although these were actively met by the appropriate remedies, they changed but little until the fourth day, about which time the inflammation leaving its original seat, passed along the muscles, forming the parieties of the abdomen and thorax, and in the latter region very particularly fixed itself on the left side over the heart. Presently, in addition to the hardness and frequency of the pulse, it presented a remarkable tremulous vibratory feel, and the little patient exhibited more general distress. The horizontal position could not be borne, the limbs could now be tossed about without the slightest pain, the heat, redness, and swelling had disappeared from the joints; there was, however, neither mitigation of pain, nor of tenderness on pressure of the abdominal muscles, nor relief from the deep distressing anxiety and pain of the heart, to which the little patient usually pointed when asked about her sufferings. The breathing was hurried and distressed; not simply as in ordinary fever, but there was a corresponding anxiety of countenance; and she continually maintained the sitting posture, the head inclined forwards, and required support of the hand of her attendant, such was the debility. She had, at this period, some cough, and expectorated with difficulty a viscid mucus. She died on the 18th day of her illness, having preserved her mental faculties in a perfect state throughout. The same remedies were used as in the former attack.

"*Dissection.*—The body was remarkably pale, and had rather a bloated appearance. The abdomen, particularly examined, exhibited no trace of inflammation. The lungs were perfectly healthy; but the pericardium was much enlarged, and evidently distended by a fluid. On opening this bag, a quantity of sero-purulent fluid, with flakes of lymph floating in it, poured out. The surface of the heart and corresponding part of the pericardium were coated with lymph, and presented the usual appearances of acute pericarditis."—*Dub. Hosp. Reports, Vol. IV.*

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23. *Case in which Inflammation was propagated from the Surface to the Heart.* By ROBERT ADAMS, Esq.—The external lamina of the pericardium being a fibrous membrane, does not readily take on inflammatory action, and therefore acts as a barrier to the extension of inflammation to its internal or serous lamina from the pleura. Nevertheless a combination of the pericarditis and pleuritis does occur, and Mr. Adams has seen inflammation disregarding all difference of structure, pass from the surface to the heart. He has seen a well marked example of this in the case of a man who received an external injury of the chest: to the ordinary consequences of the primary injury succeeded the acute symptoms of pericarditis, which terminated in death. On dissection were exhibited the effects of inflammation of the different textures from the skin to the serous membrane of the heart, which was extensively coated with lymph; the pleura and neighbouring portion of the left lung had been also implicated.—*Dublin Hospital Reports, Vol. IV.*

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24. *Chorea.*—M. LISFRANC presented to the Royal Academy of Medicine at their sitting of the 16th of August last, a lady whom he had cured of chorea by general bleedings, and repeated application of leeches to the upper part of the spine: he had been induced to try this mode of treatment, because M. Serres had assured him that he almost always found the tubercula quadrigemina in a state of inflammation in the bodies of those persons who died of chorea. M. Serres, who was present, stated that in four cases of chorea he found the tubercula quadrigemina altered; in one case a fatty tumour was developed on them: in another, there were marks of considerable excitement, with bloody effusion at the base of these bodies. In the two last cases, the whole substance of the corpora quadrigemina was inflamed, and the inflammation extended to the roof of the fourth venticle. The symptoms appeared to him to have some

relation with an injury of this part of the brain. M. Serres tried experiments on living animals, and found that those animals in which this part of the brain was injured, had motions similar to those observed in cases of chorea. M. Rolando had also perceived this fact in his experiments. M. Serres was not, however, willing to conclude that in every case of chorea the tubercula quadrigemina are injured: he had seen several in which no injury in the brain could be discovered. As persons afflicted with this disease generally experience great pain at the back part of the head, above the region of the neck; he had been induced to apply remedies to this spot, and which had often cured the complaint in its acute state; but when it becomes chronic, the frequent application of leeches, in the neighbourhood of the supposed seat of the disease, prove of no benefit.—*Archives Générales de Médecine, Sept.* 1827.

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25. *Rupture of the Heart.*—The muscular substance of the heart, constituting the whole thickness of the ventricles, sometimes gives way at a particular place, and death usually follows instantaneously. The rupture, we believe, always occurs in one of the ventricles, and most commonly in the left, we do not recollect having met with any case recorded in which the auricles were ruptured. Mr. Adams records in the fourth volume of the *Dublin Hospital Reports*, a case, communicated to him by Mr. Colles, of a gentleman who had marked apoplectic symptoms, for which he was bled, and had an issue inserted in his arm; about a week afterwards, while in the water closet, he suddenly fell down dead. On dissection, the contents of the cranium were found sound; the pericardium was distended with blood, the whole surface of the heart was coated with fat; on the anterior and upper part of the left ventricle there was a large bloody spot, immediately beneath which there was a laceration of the left ventricle, through which a large bougie could be readily passed; through this the blood had escaped, which accounted for the sudden death of the gentleman: the substance of the organ was soft and flabby; there was no disease of the valves or vessels.

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26. *Case of Active Enlargement of the Heart with Rupture of the Cordæ Tendineæ of the Mitral Valve.*—The cordæ tendineæ, which connect the auriculo-ventricular valves to the walls of the ventricles, are sometimes torn, and the accident is soon followed by a train of the most distressing symptoms. The following interesting case is related by Mr. Adams in the fourth volume of the *Dublin Hospital Reports.* The case was communicated to him by Dr, Cheyne.

"In the beginning of September, a musician, 34 years of age, of a very robust frame, sanguine temperament, and corpulent habit, being at Limerick, where he belonged to the orchestra, and leading a life of irregularity and intemperance, exposed to heats and colds, was seized with a most acute pain in the left side of the thorax, precisely in the region of the heart; at one time it was so acute as to render him nearly frantic; five or six persons could scarcely hold him down in bed; he had a dry cough, his breathing was oppressed, from which oppression he had most relief when leaning forward inclined to the left side, in which position he usually sat. He recovered partially and went to Cork, the pain continuing in a degree, with some *stuffing*, as he called it, and cough; towards the end of September, he went to Cove with the intention of returning by sea to Dublin. He there lived on board a coasting vessel for a fortnight waiting in vain for a favourable wind, much exposed to cold, and daily becoming worse; at last, impatient of the delay, he walked back to Cork to return in the mail, and it was after this walk that he first observed an œdematous swelling of his ancles, which gradually extended to his thighs.

On the 12th of October, 1813, this poor man had been free from pain for several days. The stroke of the heart was indistinct, tremulous, and appeared to extend over the whole of the left side of the chest, from above the clavicle to below the scrobiculus cordis; at no one part between these points was the stroke more distinct than at another. His pulse was 148, unequal, irregular, and indistinct; his complexion was of a leaden colour, his countenance bloated, his eye staring and wild. His recollection was becoming indistinct; unable to lie down, he passed the night in his chair. His appetite was not much impaired, but he was flatulent and costive; his tongue was furred, its edges were livid. His urine was scanty, high-coloured and lateritious.

"A walk of not more than a few hundred yards wonderfully added to the disturbance of the vital functions. While such an exertion increased the dyspnœa, it gave strength and distinctness to the stroke of the artery. His abdomen was swelled, and evidently contained a fluid. He died without a struggle on the night of the 15th of October.

"The following were the appearances on the dissection, which the surgeon-general, who had humanely visited this man, permitted me to attend. On cutting through the cartilages of the ribs, the fluid, which was in immense quantity, spouted up to some height—in the right cavity of the thorax there were several quarts of fluid. There were no adhesions between the pleuræ, the lungs were sound. The pericardium contained a considerable quantity of fluid. The heart was so large that it resembled the heart of a bullock, the parietes of the left ventricle were thickened, its internal surface much inflamed, various irregular excrescences grew from the mitral valves and semilunar valves of the aorta, and the cordæ tendineæ, which connect the larger portion of the mitral valve to the walls of the left ventricle, were torn off just at the point of their insertion into the edge of the valve; at this point there were also some of the above-mentioned excrescences; four of the broken cordæ tendinæ hung loose into the ventricle.

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27. *On the distinction between Rheumatic Inflammation of the Heart and Inflammation of the Serous Membrane of the Pericardium.* By Robert Adams, Esq.—The distinction between rheumatism of the heart and of its serous membrane, has not been sufficiently insisted upon, and as it is a matter of consequence in practice to be able to distinguish them, we copy from Mr. Adams' excellent paper on the diseases of the heart, in the fourth volume of the *Dublin Hospital Reports,* the diagnostic characters of these two affections, which he has laid down with great accuracy and precision.

"In the one case the organ is simply, and often but transiently affected, just as any other muscle is, the person has perhaps been affected with rheumatic pains in the loins, with but little fever; these suddenly leaving this region run to the diaphragm, and cause a temporary affection of the breathing, with what the patient calls spasms in the chest. The countenance undergoes sudden changes: there are at such moments strong beats of the heart, and intermissions of the pulse sensible to the patient; and in females I have sometimes seen such attacks end in an hysteric paroxysm, and all symptoms subside when the lumbar pains returned. In such cases, the tongue is somewhat foul, the skin is frequently relaxed by profuse perspiration, and the urine is remarkably turbid; but the pulse has neither the frequency, hardness, nor peculiar vibratory feel that it has in the other, and more dangerous case: the countenance does not betray that anxiety, or, as it is denominated by some authors, that anguish which it almost uniformly expresses when the membranes of the heart are affected with acute inflammation, from whatsoever cause proceeding. Although simple rheumatism of the muscular structure of the heart may occasionally pass on to carditis, or to an inflammatory affection of the serous membrane of the heart, there cannot be a doubt that the two cases are very distinct from each other, and require treatment so different as to make it highly important for the practitioner to be aware of the risk of mistaking the comparatively simple case of rheumatism of the heart, for the far more urgent and dangerous one of rheumatic inflammation of its serous membrane. The latter disease I have usually seen in children, and persons about, and under the age of puberty, in whom, metastasis seems much more liable to occur, than in those more advanced in life; and the sudden translation of the rheumatic inflammation to the heart has usually occurred where the synovial system of the extremities was the original seat of the disease: when the muscles have been affected with acute rheumatism, metastasis to the heart has not, to my knowledge, been frequent, although I have seen the diaphragm affected by it in such a manner as to excite apprehensions for a time, that the former more important organ was implicated. There seems to be a greater disposition in the acute inflammation to pass from the synovial membranes to the serous, than to any other tissues; which is not so much to be wondered at, when their great similarity of structure, appearances, and functions, is considered.

28. *Asphyxia as a cause of Death in Small-Pox.*—Dr. Rennes, physician to the military hospital of Strasbourg, is of opinion, that in most patients who fall victims to this disease from the tenth to the fifteenth day, perish from asphyxia rather than inflammation of the respiratory organs. To corroborate his assertion, Dr. R. details the results of four cases of confluent small-pox, in which there was found on dissection that the nostrils, pharynx, and sometimes the larynx and trachea, were covered with thick layers of a tenacious mucus—to this morbid alteration were also joined all those which generally accompany asphyxia.—*Journal des Progrès, Vol. V.*

29. *Fracture of the Sternum by Muscular Action.*—M. Chaussier reported to the Royal Academy of Sciences, a case of transverse fracture of the sternum in a woman aged twenty-five years; produced during labour, by the simultaneous contraction of the sterno-pubic and sterno-mastoid muscles. The patient died at the end of fifteen days. M. C. has seen but two similar cases during the twenty years that he has been physician to the Maternité.—*Journal des Progrès, Vol. IV.*

30. *On the Accidental Heterologue Tissues.* By Aug. Boulland, D. M. P.—The accidental tissues, or those which differ in their organization from that of the primitive structures, have been divided into two sections. 1st. Those which have analogues among the natural tissues; and 2d. Those which have no analogues, and which never exist but as a consequence of a morbid state. Dr. Boulland has published in the fourth volume of the *Journal des Progrès,* an interesting monograph of the accidental heterologue tissues, as they have been called, viz. tubercles, schirrous and carcinoma, melanosis, and cirrhose.

After detailing all that is known in relation to them, he concludes that in the present state of our science, the generic name of accidental heterologue tissues should not be used, unless we wish to perpetuate discussions and countenance the false ideas which result from its employment. In fact, some of these alterations, he says, consist of a truly new formation, but which do not exhibit any of the characters of an organic tissue, as the substance of tubercles, and of melanosis; others also present an unorganized newly-formed matter, but so intermingled with natural tissues, whose nutrition has been modified, that the term new tissues would infallibly lead to error, such are schirrous and carcinoma; lastly cirrhose is but a modification of nutrition in the normal organic elements, without any accidental formation.

If however we wish to preserve the term *heterologue morbid productions,* M. B. thinks that we can comprehend under this title only tuberculous matter, the matter of carcinoma, (encéphaloide of Laennec,) and the non-organized matter of schirrous, observing that there is not comprehended by these two last the whole of cancerous tumours, the organized portions of which are not a new production. Melanosis must be withdrawn from this class, as it has an analogue in the normal pigmentum nigrum, and must be united to a class of *morbid productions with analogues.* On the other hand, M. B. is of opinion that we must reunite to the heterologue productions, pus and its varieties, the matters similar to fat, to starch, and to honey, &c. stony concretions, false membranes, and hydatids.

As to the mode of production of these different alterations, they consist, according to M. B. always in alterations of nutrition or secretion, which produce them separately or simultaneously. In some cases it must be admitted that these derangements of functions are the result of inflammations, in others we can only observe fluxion, or active sanguineous congestion; finally, in some we are obliged to admit different obscure hypotheses, all more or less probable, but which wait their confirmation from time and experience. Numerous researches are still required to place our knowledge of these tissues on a permanent and solid foundation.—*Ibid.*

MATERIA MEDICA.

31. *Proto-Nitrate of Mercury.*—Dr. **Sundelin** of Berlin, considering the inconveniences attending the use of the deuto-nitrate of mercury, owing to the caustic form of the deutoxide, prepares a nitrate of mercury in the following manner; it contains the protoxide only. Take of pure metallic mercury, pure nitric acid, simple distilled water, of each one ounce; let them be placed in a cold situation, in an uncovered glass vessel, until crystals are formed; wash the crystals in distilled water, and keep them in a glass vessel well covered. Dr. S. at first gives one-sixteenth to one-eighth of a grain of this salt, and increases the dose according to circumstances, to a grain twice a day; he prefers it in the form of pills, which he makes in the following manner. Take six grains of the crystallized nitro-oxide of mercury, dissolve them in a little water; add to the distilled solution liquorice powder and mallow root, of each one drachm; let the mass be made into ninety pills. Two pills are to be given every day, and the number gradually increased to sixteen. "The intestinal canal bears this form much better than the sublimate, and it may be conveniently given to very irritable patients. It takes, however, a greater length of time to produce salivation. It favours the secretion of urine much more than that from the skin. It is very beneficial in secondary ulcers of the palate, exanthematous eruptions, and ulcerations of the skin produced by syphilis, diseases of the periosteum and the bones. The treatment must be accompanied by a spare diet, mild baths, mild temperature, and the use of the decoction of sarsaparilla."

32. *On the Medicinal Properties of Madar.* By **Wm. Cumin**, M. D.—Madar has been long used by the natives of Hindostan, in elephantiasis and other cutaneous diseases. It is of a whitish colour when in powder; its odour is faint, and somewhat resembles opium, and its taste approaches to that of the common horse-bean. Mr. Cumin has administered it to five patients in the Lock Hospital, in the form of powder, in the dose of from three to five grains two or three times a day. In all the cases it produced nausea, and sometimes vomiting; and these symptoms occurred in some instances very soon after the powder was swallowed, but more generally not till after an interval of an hour or more. In the five cases in which Mr. C. used the madar, in two it produced no benefit, in two it seemed to contribute to a successful result, and in one he is inclined to ascribe to it the completion of the cure. Mr. C. considers it to be an alterative of a highly concentrated character.—*Ed. Med. and Surg. Journ. October,* 1827.

33. *On the Bichromate of Potass.* By **Wm. Cumin**, M. D.—"The first effect of the habitual application of the solution of bichromate to the skin is to produce an eruption of papulæ. These, after a little time, become pustular, and, at length, provided the exposure be continued, deep sloughs form under the pustules. The sloughs are of a peculiarly penetrating character; an instance has even occurred in which a complete perforation through the muscular substance of the hand has in this way been produced. Great differences exist among the individuals subjected to the action of the solution; some suffering

very slightly, others severely, so much so, indeed, that swelling of the face and inflammation of the eyes have, I am assured, been produced in addition to the symptoms above described. To avoid the injurious consequences of immersing the hands and arms in the solution of bichromate, an apparatus has been constructed, by which the cloth is passed through the liquid dye, without requiring more than the tips of the fingers to be dipped into it. Even this slight exposure, and the handling of the moist cloth after it has been thrown off from the machine, cause the eruption to make its appearance in susceptible individuals; and it would no doubt proceed on through its several stages, were they not relieved for a time from the duty. Other liquids used in dying and calico printing produce irritating and injurious effects; thus the solution of chloride of lime causes softening, and sometimes destruction of the nails with excoriation, but nothing resembling the effects of bichromate of potass, the action of which appears to be altogether peculiar.

"Soon after I succeeded Dr. Brown in the charge of the Lock Hospital, I began to prescribe a saturated solution of bichromate of potass, as an application to tubercular elevations, excrescences, and warts. In these cases, the new growth has sometimes been removed by absorption without any slough; but where a slough has formed, it has always served to expedite the cure, and in no instance have I observed it to be followed by a deep or unmanageable ulceration. In a case of warts, more extensive and formidable than any I had before met with, or seen delineated, which I treated last winter, the solution of bichromate was the only remedy which acted effectually, without causing such intolerable pain as to preclude the continuance of its application.

"The bichromate of potass, although decidedly poisonous; does not appear to be very active in its operation. It inflames the stomach, both when introduced into that organ, and when injected in a considerable dose into the veins. Under these circumstances it would require some degree of medical hardihood to venture on its employment as an internal remedy; but it is probable, that, if cautiously used, it may be found, like arsenic, to possess considerable tonic virtues."—*Ibid.*

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34. *Styptics.*—Sir Astley Cooper says "in bleeding from small vessels on wounded surfaces, very fine wool laid down and confined by bandage upon the part is one of the best styptics. The wool may be dipped in flour to add to its efficacy.

"There is an old prescription of a styptic in St. Thomas's Hospital, which I have seen useful. ℞. Pulv. catechu—pulv. bol. armen. āā ℥ij.—alum. ust ℥j.—tinct. opii. q. s. at fiat pasta.

"This will stop the troublesome bleeding from leech-bites."—*Lectures on Surgery, Vol. III.*

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35. *Application of Medicines by the Skin.*—"Dr. Martin, Jun. has been lately occupied in experimenting on what the French call 'la méthode endermique' of exhibiting medicines; and in the number of the *Revue Medicale* for September, he has published a memoir on the exhibition of the sulphate of quinine by the skin in intermittent fevers. He gives six cases in which the remedy was thus administered, in all of which, (except one, in which it was found necessary to give the medicine internally,) it proved successful. Dr. M. considers the question of the absorbing powers of the skin as set at rest by the experiments of Bichat, Pinel, Chaussier, Alibert, and Dumeril. But allowing a doubt to exist as to the power of absorbing where substances are simply applied to the skin, it does not apply here, as in this method the epidermis is previously removed by a blister. 'The skin deprived of its epidermis,' says Dr. Martin, 'possesses a power of absorbing so great, and so manifest, that it admits not of doubt. Who does not know the terrible effects of rabies, and the venom of serpents thus introduced into the body? Dr. Lesieurs is the first who proposed this function of the skin as a new method of giving medicines;

and wished to assure myself of the results of a method which appeared likely to be so useful.' The method he uses will be best shown by transcribing one of his cases.

"Claire Bels, ætat thirty-four, was seized in the beginning of September, 1826, with remittent fever, which was stopped in a month by means of the sulphate of quina, given internally. Fifteen days after, a quotidian intermittent showed itself. The fever, which at first was slight, becoming severe, she entered the Hôtel Dieu, December 18th, with the following symptoms:—Face flushed, heat of skin, slight moisture; pulse strong, bounding, and frequent; tongue red and dry; frequent cough; pain in the chest, increased on coughing; slight head-ache; the other functions natural. She was bled to eight ounces, and ordered pectoral medicine, with low diet.

19th. A return of fever. A blister was applied to the arm.

20th. Perfectly calm. The blister rose well. Six grains of sulphate of quina in powder was sprinkled on the blister, and the wound covered with beet-leaves. At noon the paroxysm came on as before. Blister very painful.

21st.—Great pain in the arm, which is swollen and red. Six grains more of the quina were put on the wound. No fever to-day.—In the evening, great pain from the wound, to which a poultice of linseed-meal was applied.

22d.—A bad night; much suffering; no fever during the day. Continue the cataplasm.

"23d.—A quiet night; scarcely any pain, and no stiffness of the arms. No return of fever.

"24th.—The patient is doing well. Slight pain from the blistered part; good suppuration. No return of fever.

"26th.—The wound is nearly healed; scarcely any pain; no fever.

"31st.—The patient has quite recovered, and has been dismissed cured.

"Dr. M. soon observed that, by mixing the quina with the cerate with which the blister was dressed, the violent effects of the salt on the wound were moderated, and its absorption not at all retarded.

"In enumerating the advantages of this mode of administering the quina, Dr. M. remarks that patients who cannot or will not take the quantity of medicine necessary for their cure, may in this way be brought under its influence, without their being aware of it. In children, also, where it is sometimes nearly impossible to give medicine internally, this mode may be advantageous. In some cases of intermittent fever, where congestions or inflammation of the stomach or intestines prevent the internal exhibition of quina, this new method would answer. Sometimes also the medicine runs off immediately by the bowels, and in this way the first doses are entirely lost: this is avoided in giving it through the medium of the skin. Another advantage pointed out is, that there is no occasion to wait for the remission of the paroxysm, but it may be applied at any period of the fever. It appears also that, by being carried into the blood without alteration much smaller doses of it will stop the course of the disease than when given by the stomach. The quantity of the sulphate necessary to stop the fever, when taken internally, is from six to twelve grains; when applied to the skin, about four grains will suffice in mild cases.

"The only objection to this plan appears to be, that a blister becomes necessary.

"Dr. M. draws the following conclusions:—1st. That the sulphate of quina, applied to the dermis, denuded by means of a blister, stops the progress of intermittent fever, when nothing is opposed to its absorption.

"2d. This salt operates in these diseases by a general and specific, and not by revulsive or any local action.

"3d. The absorption is very rapid.

"4th. The salt thus absorbed suffices in smaller doses than when given by the stomach.

"5th. The sulphate applied to the skin in powder causes great inflammation.

"6th. The sulphate mixed with cerate causes scarcely any pain or inflammation.

"7th. This medicine, valuable for administering the quina to certain patients in simple intermittents, may become a great resource in certain cases of dangerous and obstinate fevers."—*Lond Med. and Phys. Journ. November*, 1827.

36. *Sulphate of Quinine.*—M. **Bland**, Physician to the Hospital of Beaucaire, observed in an epidemic intermittent fever which prevailed in the summer of 1825, that the sulphate of quinine when given to the extent of twenty-four grains a day, produced on the second or third day, in many individuals, a considerable degree of deafness. He observed this most frequently in tertians in individuals who were slender and of a nervous temperament. This symptom was attended with head-ache, it disappeared spontaneously on the eighth or twelfth day.—*Journal des Progeès, Vol. V.*

PRACTICE OF MEDICINE.

37. *Cases of Inflammation of the Tongue.*—In the Periscope of our last number, we gave two cases of this rare and alarming disease; the following cases will be considered a useful addition to our knowledge of the affection, and are especially interesting as they yielded to milder treatment than was employed in those previously noticed. *Case I.*—"A stout man, aged 68 years, by trade a mason, was attacked with pain in the throat, redness of the fauces, and swelling of the tonsils, but without much fever. These symptoms were considerably diminished by leeches applied to the angles of the jaws, emollient gargles, and a mustard pediluvium. But in consequence of exposure to cold he was soon afterwards seized during the night with a tormenting sense of tightness at the root of the tongue, difficulty in speaking and swallowing, and ere long with swelling in the tongue and impending suffocation. When his physician saw him in the morning he could not speak, the pulse was very quick and feeble, the countenance pale and anxious, and the tongue filled the whole cavity of the mouth. On account of the firmness with which the tongue was pressed against the roof of the mouth, and the patient's inability to separate the jaws to half the usual distance, it was found impossible to make on its upper surface more than two short incisions, from which very little blood flowed. An incision was therefore made with the lancet into each sublingual vein; and when the blood ceased to flow, fresh incisions were made, and the discharge promoted by injecting warm water into the mouth. In the course of two hours the swelling was so much diminished that the man was able to rinse the mouth with warm milk, after which a blister was applied to the neck, and a purgative enema administered. A rapid amendment then took place, so that before the close of the day he could speak intelligibly; and his recovery went on steadily. *Case II.*—Another case was of a less acute form than the former. It had existed eight days before it came under treatment. The patient had little pain or fever, but swallowed with great difficulty, and could breathe only in the upright posture. The case was cured by blisters, gargles, and the mustard pediluvium. —*Horn's Archiv. für Medizinische Erfahrung.*

38. *Employment of Iodine in the Treatment of Cynanche Parotidœa.* By Dr. **Neumann.**—"Dr. Neumann, of Neustadtel in Silesia, has employed the hydriodate of potass with great success as an external application in cynanche parotidœa, which prevailed epidemically in Neustadtel in June, 1823. Among the poorer orders who were treated in the ordinary way, the disease was very tedious, and generally ended in suppuration. Among the better ranks, the treatment consisted in the exhibition of an emetic, and the application over the tumour of a plaster composed of eight parts of mercurial ointment and one part

of the hydriodate of potass; and the ordinary effect was a radical cure within three or four days. Dr. Neumann adds, that he never observed in the cases so treated any metastasis to other organs; and he is disposed to impute this to the formation of an erythematic eruption, which always appeared on the first or second day, and remained from eight to twelve days.—The author has annexed a very instructive case illustrating the deleterious effects of this drug when given in too great quantity. It was given to cure enlargement of the cervical glands, which it accomplished very effectually; but the patient was at the same time attacked with violent palpitation in the chest and abdomen, which was relieved only by the horizontal posture, then with great weakness, and tendency to faint, and subsequently with emaciation and general dropsy. The palpitation was so violent and constant as at first to appear connected with organic derangement; but the relief obtained from the horizontal posture, the absence of cough and dyspnœa before the dropsy commenced, and the regularity of the pulse, led Dr. Neumann to conceive that the disorder of the heart was merely functional. Accordingly, although the patient had been ill for a twelvemonth, the irregularity of the heart's action was soon subdued by the employment of digitalis and cherry-laurel-water; and the tendency to faint and anxiety at the same time disappeared. The dropsy, however, continued much longer; but at length it slowly receded under the use of the *Arnica* combined with soap."—*Rust's Magazin für die Gesammte Heilkunde*, 1826.

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39. *Case of Cancer of the Breast cured by Antiphlogistic Treatment.* By PROSPER GASSAUD.—"Madame Dillon, residing at Toulouse, aged 49, of a sanguineo-nervous temperament, the mother of several children, had enjoyed good health up to her forty-seventh year. She then began to be the subject of retarded menstruation, and to be much affected with pains in the abdomen. In pursuance of the advice of her physicians, she took several purgative draughts, which procured her some relief, without, however, restoring her health, which still continued in a tottering state. In the month of October, 1821, after having given herself a slight blow on the left breast, she perceived a tumour there, about the size of a nut. At first this excited but little attention; but as it gradually increased, and in time began to be painful, she sought the opinion of a surgeon, who recommended a resolving plaster to be applied to the part, and made her take daily a *white* powder.

"During a whole year the patient derived no benefit; on the contrary, the pains increased; sleep entirely left her, the tumour made rapid progress, and at length an abscess was formed towards the depending part.

"Being at this epoch physician to the medical charity of the district in which this poor woman resided, I saw her, for the first time, on the 6th October, 1822, and found her in the following state: rather unusually thin; her face pale; contracted, and expressive of suffering; skin hot, and unusually so towards evening; hard and frequent pulse; habitual and obstinate constipation; the left breast the seat of three unequal and agglomerated tumours, the largest resembling a hen's egg, which was at the same time in a state of ulceration. The skin in the neighbourhood of the local affection was corrugated, and the folds were of a brownish hue; the edges of the ulceration hard, unequal, swollen and highly sensible; the patient declaring that the sensation was that of red hot coals. The bottom of the sore was full of fleshy, dull white granulations, and discharged a fœtid, acrid, serous, and bloody fluid. Digestion was difficult; sleep a stranger; nutrition imperfect; and the mind greatly depressed.

"My first attempt was to inspire my interesting patient with confidence, from the hope afforded of relief by means of the new doctrine, and the cures that had already been effected, in several similar cases, at Paris. She promised implicitly to follow my advice.

"The first day, I dismissed the nutritive food and generous wine, which she had been using in order to keep up her strength, confining her to a milk and vegetable diet, and restricting her, in point of drink, to mucilaginous and simply sweetened water. Thirty leeches were applied in the evening, as near the seat of the evil as was practicable; upon their removal, not only their punctures, but the whole ulcerated surface was covered with a linseed-meal poultice, moistened with a decoction of leaves of nightshade and poppy-heads.

"On the morrow there was a little amendment, although she felt herself very weak: the leeches had bled well, and I ordered this depletion to be repeated three times in the course of twenty-four hours. The patient had some repose, and the sore put on a better aspect. In four days more the leeches were repeated, to the amount of twenty, but less blood was obtained; and this time the patient was not so much weakened, while the pain was lessened.

"By the 12th, the stomach, which had been over-excited by the wine and previous regimen, began to be in a better state; the tongue had nearly regained its natural aspect, being more moist and less red. Hope likewise seemed to be playing a useful part; the countenance began to brighten, the spirits mounted, and she declared that she had enjoyed two hours tranquil sleep during the preceding night—a thing to which she had been a stranger during six months. *Contin. regimen et cataplasmata.*

"18th. The ulcer presents an entirely new aspect; its edges are less hard and more united; the veins surrounding the body of the mamma are diminished; the bottom of the sore has assumed a healthier colour; the discharge is less bloody and of better consistence; *fifteen leeches bled well,* and, according to the patient's account, entirely removed the pain.

"24th. The ulcer contracts; the edges are subsiding, and present a vermilion hue: I now commenced the application all round of strips of fine linen, smeared with recently made *opiated* cerate; while, at the same time, the whole tumour was covered with the application already mentioned.

"30th. A remarkable improvement; the glands in the neigbourhood of the ulceration, which were of unusual sensibility, have lost about a third of their bulk, and give little or no uneasiness to the patient. Twelve leeches were this day applied; but in other respects there was no alteration of treatment. The first days of November being cold, I advised Mad. Dillon to keep herself warm, and on no account to expose herself to damp. The digestive organs being in a favourable state, I judged it proper to try *revulsion.* Accordingly, two of the following pills were ordered every morning:—℞. Saponis ʒj.; aloës: hydrarg. submur. (calomel,) āā. ʒss.; syrupi rhamni, q. s. ad faciendum pil. no. lxij.

"Every ten days a small number of leeches was applied, and after every application of this nature the state of the breast was manifestly improved. The appetite improved so much as to prompt the patient to solicit for indulgence in the article of diet, and she was allowed a small portion of fish.

"Towards the close of November the pain was entirely gone; respiration, which had been hitherto oppressed, became free; instead of a foul ulcer, the mamma exhibited a healthy sore, approaching rapidly to cicatrization; the neigbouring tumours subsided, and scarcely equalled a pea in point of size. The temper of the patient, from being morose and unsteady, became remarkably cheerful; her physiognomy indicated the entire removal of suffering; the nutrient and locomotive functions were executed with ease; and, in short, the general state of affairs was good.

"About the beginning of November, the purgative plan having excited some slight cholic, I suspended its operation *pro tempore.*

"12th. Fifteen leeches; and on the 13th the pills resumed, in smaller doses. During the month the wound was regularly dressed, and cataplasms were daily applied.

"January 1st, 1823. One entire and undisturbed night's rest; functions entirely natural; ulcer ready to heal up; mammary glands, at first so large, diminished to almost their natural state; *cataplasms discontinued; dressings with saturnine cerate; more animal food; wine and water.* The patient returns to her domestic occupations. At the end of the month the ulcer was entirely healed, and from that time I look upon it that Mad. Dillon was the subject of a radical cure.

"From this period more than four years have elapsed, and nothing whatever has occurred to disturb my patient's health."—*Nouv. Bibl. Méd. June*, 1827.

40. *Phagedenic Ulceration of the Gums in Children.*—"We have received the following note from Mr. Bush, of Frome.

"In the Journal for June, Mr. Thomson has given a paper on a species of phagedenic ulceration of the mouth, called 'Gangrenous Excoriation, or Erosion,' in which he recommends, and perhaps with much propriety, the Balsam of Peru. The disease is well known to practitioners, especially those resident in crowded manufacturing towns, as attacking the children of the lower orders, and more particularly such as are deficiently supplied with nutritious food, and have not the advantages of well-ventilated rooms, regular personal ablution, and frequent changes of clean linen. I have seen this disease to supervene on typhus, scarlatina, rubeola and variola, and at all periods from one to ten years. It takes place in children of delicate constitutions, such as are of scrofulous diathesis. Having witnessed a great deal of difficulty in curing these cases by bark, wine, and the ordinary routine of practice, I was induced (some ten or fourteen years ago,) to give the carbon, and with the most happy results. Indeed, where the plan has been tried early, I do not remember an unsuccessful instance. The following is the formula I have commonly used; but, when the bowels have been too relaxed, I have formed the linctus with syrup. pap. alb.—℞. Carbonis ligni, mellis, āā. ℥j. M. sumatur cochleare minimum sœpe, vel quartâ quâque horâ. This serves as a local and constitutional remedy. I have used it very extensively in cases of ill-conditioned ulcers, accompanied by constitutional debility, both internally and as a local application, with marked advantage.

"It is worthy of observation, that animal and vegetable oils, sugar, gum, starch, and other substances found to contain great quantities of carbon, are those which by experience are found to recruit and restore most efficiently debilitated constitutions."—*Lond. Med. and Phys. Journ. October*, 1827.

41. *Treatment of Acute Rheumatism by Tight Bandaging.*—M. Velpeau, some time ago published an account of his treatment of the several varieties of diffuse cellular inflammation by graduated pressure, applied by means of the roller bandage. Dr. Varlez surgeon in chief of the military hospital of Brussels, has treated acute rheumatism of the joints with great success, by the same application. He relates in the *Archives Générale de Médecine*, for June, 1827, several cases "in which the bandage was applied in the acutest form and stage of the disease, when the redness and swelling were great, the throbbing pain violent, and the general fever high, and in which the treatment was crowned with speedy and complete success. In almost every instance the application of the bandage is followed at first, and for two or three hours, with increase of the pain, so that the patient can with difficulty be persuaded to persevere; but soon afterwards the pain begins to abate, and the abatement then advances with rapidity. Dr. Varlez generally moistened the bandages with an emollient decoction, which, besides having the ordinary effect of emollients, were useful by increasing the pressure."

42. *Prussiate of Iron in Epilepsy.*—The Chevalier Kirkhoff, of Antwerp, has employed for a long time with success, the prussiate of iron in the treatment of epilepsy, when it does not depend upon organic lesion. He administers the remedy, at the commencement, in very small doses, beginning with half a grain a day for an adult, and gradually augmenting it to three, four, five, or six grains, and often more. When the patient is of a sanguineous constitution, the use of this remedy is preceded by a large bleeding, and is accompanied by the application of some leeches to the temples, repeated from time to

time. M. K. recommends also the following regimen; considerable exercise, but without inducing fatigue; to avoid exposure to vicissitudes of temperature, dampness, or great heat; to shun every thing that can produce strong impressions upon the nervous system, as venereal pleasures, strong emotions, as well agreeable as disagreeble. When the patient has a feeble constitution, he puts him upon a light, nutritive, and easily digestible diet, preferring animal food, as veal broth, poultry, milk, eggs, &c. He recommends the farinacea also as accessory articles of diet. Coffee, tea, liquors, finally every thing that can over-excite is forbidden. It is necessary that the patient should eat little at a time and often, in order to avoid producing an irritation of the stomach, which might react upon the brain, the principal seat of epilepsy. As it is necessary to pay the greatest attention to prevent all irritation of the brain, both direct and indirect, it is also necessary to keep the bowels open by enemata. But when the patient is very robust, and of a sanguineous constitution, M. K. prescribes a strict antiphlogistic diet and vegetable food.—*Journal des Progrès, Vol. IV.*

43. *Chloride of Soda in Tetter.*—M. Lisfranc has lately used, with success, in cases of obstinate tetters, a lotion composed of a solution of the chloride of soda. He first subdues the symptoms of inflammation and then uses the lotion.

44. *Muriate of Iron in Softening of the Stomach.*—"In the Heidelberg Klin. Annalen, Dr. de Pommer has related some cases of supposed softening of the stomach in infants, a disease to which the attention of the profession has recently been called, (see the paper of Dr. Gairdner in the Medico-Chirurgical Transactions of Edinburgh, &c.) in which he administered the muriate of iron with apparent advantage. We say supposed cases, because the actual condition of the stomach in cases terminating favourably must remain matter of conjecture, and all that we can venture to affirm is, that the symptoms of the children who survived were very similar to those in the children who perished, and in whom the coats of the stomach were found softened. In the cases which did well under the muriate of iron, there was constant vomiting, with frequent, loose, fetid stools; moaning, and anxiety of countenance; but no tension of the abdomen, or tenderness on pressure. The following is the prescription recommended:—℞. Rad. Alth. ℥ij.; Coq. c. aq. fontan. q. s.; Colal. ℥ij.; adde Pulv. Gum. Arab. ʒij.; Ferri Muriat. ℈jss.; Syrup. Alth. ʒvj. M. S. Of this two tea-spoonfuls are given every hour, care being taken to shake the mixture each time."—*Lond. Med. and Phys. Journ. Nov.* 1827.

45. *Case of Dysentery cured by Ipecacuanha.* By R. Bright, M. D.—"J. C. æt. 60, was admitted, under my care, into Guy's Hospital, January 25th, 1827, having for the last three or four weeks had frequent dejections containing blood and mucus, and passed with much pain. Habeat pulv. Ipecac. gr. j. sexta quaque hora.

26th. Five stools with griping and tenesmus; chiefly greenish mucus, mixed with blood. Repetatur Ipecac.

27th. Passed a better night than he has experienced for a month; disturbed but twice in the night, and experienced much less pain. Hab. Ipecac. gr. ij. s. q. h.

28th. But two stools since yesterday morning, with less blood. Rep. Ipecac.

30th. Only one or two stools in twenty-four hours; no griping or tenesmus.

Feb. 4th. Going on well. In a few days after, without any change of medicine, dismissed cured."—*Bright's Reports.*

[We employed the ipecacuanha in dysentery very extensively, when physician to the Philadelphia and Southern dispensaries, and were much pleased with its effects. We prescribed it, usually, suspended in mucilage of gum arabic, and with a few drops of laudanum. It is particularly useful in chronic cases, but is also serviceable in very mild acute cases, or where the acute inflammation has been subdued by the usual means. With the aid of absolute diet, and absolute rest, two most important therapeutic agents in this disease, many cases may be cured, which, under the purgative treatment would terminate fatally. We have also derived benefit from the flannel roller, as recommended by Dewar. I. H.]

46. *On Hydrops ventriculorum cerebri acutus.* By Dr. T. H Kopp, of Hannau, Germany. Communicated for this Journal by Dr. T. Leo-Wolf.—This disease derives its name from the very singular results which proceed from it, namely, the formation of water in the ventricles of the brain; and even should the evil not increase to that extent, but merely that state of the disease which is necessary for the formation of the water occur, it nevertheless retains the same appellation.

The commencement of this disease is rarely cognizable, often escapes our observation, or is supposed to be caused by dentition, worms, or merely by a scrofulous state of the bowels, or else by an intermitting fever. Even should the physician pay attention to that disease, it is sometimes impossible to declare with perfect certainty that the existing symptoms are those of incipient hydrops ventriculorum cerebri acutus, because its premonitory symptoms are in many instances the same as those of various other diseases. In the early stage of this disease, the mode of cure can only be based upon a probability, and a satisfactory prognosis is to be formed from the further course of the disease. If the physician observes its real character only when coma and convulsions have appeared, then all hope of saving the patient is, most generally, extinct. In general, the complete cure of the disease can be effected, solely, in the incipient stages of the complaint; but should the effused water be already exerting a strong pressure upon the brain, and the affection of the sensorium be prevailing, then all expectation of affording relief, is, in most instances, futile.

Among the symptoms of hydrencephalus, I find two characteristical classes, the one is manifested by the *abdomen*, the other by the *brain*. The one appears at first, this I term the *abdominal period;* and the other, from its most striking symptom, the *comatose period.*

I do not mean to assert that the affections of the abdomen, vomiting, constipation, (sometimes diarrhœa,) variation of the urine, collapse of the bowels, tormina, indigestion, irregularity of the appetite, &c. *always* proceed merely secondarily from the reaction of an inflammatory state of the brain. I have attended patients, where those gastric symptoms preceded, without there existing at the same time any symptom of an affection of the brain, viz. head-ache, vertigo, drowsiness, intolerance of light, &c.; these only ensued after the former had lasted for some time. In many cases, however, the affections of the abdomen were immediately or very soon followed by head-ache, shunning the light, drowsiness, &c. But the affections of the abdomen are, in the incipient and lasting state of the disease ever the principal and most prominent symptoms, and in their duration, force, and extent, they are not proportionate to the primary affection of the head. The affections of the abdomen will never fail to be constantly present in the first stage of the disease, and they will not always be merely *sympathetic,* as if they proceeded consensually from the morbid state of the brain; still they will most certainly much more frequently, than has been believed, maintain an idiopathic character. Nevertheless it is peculiar to these affections of the abdomen, that they maintain a connexion with the affection of the brain, but even suppose that the latter in many instances is the cause of the former, still frequently a peculiar morbid state of the abdomen may be succeeded by that affection of the head; however, this subject will require a further and very minute investigation.

A constant symptom in the first stage of hydrencephalus is *vomiting,* and it is attended with this peculiar characteristic; it comes on unexpectedly and suddenly, without being preceded by excessive nausea; the tongue is generally but little furred and the vomiting is more frequent when the patient is supported in a sitting position, than in a lying posture. An *irregular stool*—generally costiveness, and rarely diarrhœa—are likewise its attendants. If a child vomits often, at long intervals, if it be costive or its evacuations otherwise irregular, if the abdomen be collapsed and painful to the touch, if those remedies which are commonly employed to remove these affections, viz. Pot. Riverii, extr. colombo, rheum, magnesia, &c. are accompanied with no beneficial result, after being used for a sufficient time; if the urine be dark and *slimy;* if head-ache be observed—in infants by their motions and from their cries; in elder children by their lamentations—if the whole state of the disease maintain a kind of stability and obstinacy; then I most particularly advise an attention to the other symptoms by which the beginning of the hydrops ventriculorum cerebri acutus is accompanied.

I have rarely had an opportunity of witnessing in my patients that *itching* which Formey has described. But the confined and collapsed abdomen, without the evacuations of the intestines being increased, (of which *Goelis* gives notice,) as the symptom of the inflammatory state of the disease, requires, as such, all our attention. I have found, however, that affection more particularly in cases where the effusion of water has already taken place.

If the second stage of the disease be arrived, drowsiness and the other symptoms, which denote pressure upon the basis of the brain, then the diagnosis is very easy, but the cure becomes the more difficult, and at this period is generally hopeless.

In cases of very young children, who are not yet able to talk, in determining the *beginning* of hydrencephalus, we ought principally to rely upon the abdominal symptoms, vomiting, obstruction, &c. for the very important symptom of head-ache, is in these cases extremely difficult to ascertain. The other immediate symptoms of the affection of the brain among patients of a tender age, are in the first period equally indistinct, ambiguous, and uncertain, as well as the increased sensibility of the eyes when exposed to the light, the redness of their conjunctiva, their sleeping with half-opened eyes, the fixing of the position of the head, the putting of the hand to the head, the heat in the forehead, the altered feature, the itching in the nose, &c.

Sometimes in the beginning of hydrencephalic affections, even if they are not recognized as being of that character, the cure may be effected, if *calomel* and bleeding be had recourse to, as in various instances of painful dentition.

Sometimes the duration of drowsiness extends from fourteen to eighteen days. I have at least observed in several children, that it lasted throughout this lapse of time. Drowsiness and numerous spasmodic affections were alternatively giving way to more lucid intervals; during which periods the patients did not seem to be in imminent danger, and while reclining, they swallow whatever is placed in their mouth. They sometimes suddenly return to a state of consciousness, awake from their stupor and converse, but as suddenly relapse into their former condition. This miserable and uncertain state of such patients is described by their friends as one, which places them between life and death.

I remember a case, where, during the period of coma, the left eyeball was very prominent, and the whole eye œdematous.

Often I observed during the spasms an imperfect hemiplegia; in some patients, on the left; in others, on the right side. The arm and leg could then be moved but little, and therefore the patient used the opposite members, whenever he wished to change his posture. The nature of his motions, and even the movements of his features, demonstrated already this partial state of paralysis. The convulsions agitated the lame side in a very slight degree, or not at all.

During the state of coma, I remarked in some hydrencephalic patients a kind of rhytmic striking of one of the arms; the patient raised it upwards, thrust it into his hair, or brought it to his nose, and then laid it down; after a certain time this motion was recommenced, and indeed, I have attended children, who have pursued it for several successive days.

One of the most characteristical phenomena in the hydrops ventriculorum cerebri acutus is the seeming likelihood of recovery that appears generally a short time previous to death.

This disease is not altogether independent of the state of the atmosphere, for it displayed itself so generally at appointed seasons, that the cause must necessarily have been attributed to the particular state of the air, and by no means whatever to casualties. Especially in the spring of the year, 1818, I had an opportunity of acquiring that experience in the case of many children. Exactly at the same time adults were more than usually affected with *epilepsy*, and those adults who had never before experienced it, suffered in common with such as had previously had it; however their disease, particularly that of the former, was not very obstinate, and the cure was radical. At the same time, vertigo, congestion of the brain, and apoplectic affections were prevailing. The weather was dry, and the wind generally from the east and north-east.

If the abdominal period lasts a long time, without being for some weeks succeeded by violent affection of the head, I should conclude, that the secretion of the water will rather be preceded by a mere congestion, than by a real inflammation of the brain.

Certain conditions of the abdomen have this peculiar character, that they excite congestions or inflammation of the brain, and the formation of water in the ventricles, by a sympathetic influence upon the head. To these may appertain such cases of the disease, as began merely with gastric symptoms, unaccompanied by any symptom of an affection of the brain, this latter subsequently appearing. Often in the dissection of those who died hydrencephalic, there were found disorganizations in the abdomen, swelling of the glands in the mesentery, inflammation of the liver, of the intestines, &c.

It is very easy to observe, that an hereditary disposition for that disease, sometimes prevails. One family of my acquaintance lost three of its members by the hydrops ventriculorum cerebri acutus; in another, I saw three individuals labouring under this disease, in its more or less advanced state, and I have often seen brothers and sisters suffering at the same time from it.

By one of the phenomena which this disease produces, we are reminded of similar observations, made in relation to croup; namely, that dissection at times does not present to our view that state of the brain, whereby the former condition of the patient may be satisfactorily proved, and we only find a small quantity of water in the ventricles, whereas we should have expected, according to the degree of disease, a much larger quantity of it. I particularly experienced this in the case of a child of two years, who was suffering very acutely from this disease, and whilst it was also suffering from cutting the two hind teeth. The engorgement of the vessels of the brain, was in that case very great, and blood instead of water seems in such instances to be effused into the ventricles of the brain, producing pressure upon the brain, and similar symptoms.

The physician is much more successful in the treatment of croup, than in hydrops ventriculorum cerebri acutus. The former, even in its incipient state, is attended with many frightful symptoms, but if the physician be called in at an early period, he is generally able to control the violence of the disease in a short time. Whereas people most commonly misunderstand the approaching danger of hydrencephalus, and should the physician have the good fortune to remove the complaint, still his merit, as displayed in the cure, is at times not sufficiently acknowledged, because the patient was not believed to be very dangerously ill. If the disease has arrived at that stage, wherein its imminent danger becomes manifested even to the unexperienced, as when attended with convulsions, &c. then, in most instances, a cure may be despaired of. Finally, the uncertainty in the diagnosis of this disease in its commencement, in many cases, prevents the physician from adopting measures sufficiently powerful to prevent the farther progress of this disease.

Even should the disease be not very far advanced, its cure is nevertheless very difficult, but if the water is already exerting a strong pressure upon the brain, it is incurable. The following remedies have been found most efficacious.

Remedies for internal use.—Hydrargyrum in not too small a dose, and administered for a considerable time; particularly calomel, on account of its effect in producing a frequent stool, but in some instances it is better to use the more penetrating hydrargyrum oxydulatum nigrum, (mercur. solub. Hahnemanni.) Digitalis purpurea produces an alleviation of the disease if the secretion of urine be increased by it; but the patients can seldom bear it, because it excites nausea and uneasiness, and augments the vomiting.* In some instances rad. scillæ mixed with mercury, were accompanied with a happy effect. In addition to mercury, I have also remarked the utility of the kali, (carbonicum,) saturated with vinegar, (potio riverii aceto vini parata, seu liquor kali acetici extemporaneus,) together with aq. patrosel. or aq. flor. til. in like portions; the vomiting being diminished, the gastric affections in general mitigated, and the secretion of the urine, which is so necessary in this disease, being increased. Flores zinci with magnesia, acted successfully in several instances, though they were inferior to the before-mentioned remedies.

More irritating remedies were sometimes accompanied by a very happy result, but only after the free use of mercury, bleeding, &c. Flores arnicæ and moschus, were found to merit the preference during periods of weakness of the pulse, dimness of sight, constant paleness of the countenance, and exhaustion of the patient.

Remedies for external use.—The principal is the application of leeches in a sufficient quantity around the head, and these sometimes repeatedly applied, but if the patients are somewhat advanced in years, a venesection. Cold fomentations to the head, which part in the very commencement of the treatment should be shaved, for the purpose of employing the external remedies with greater effect. These are composed of nitrum, sal. amon. vinegar and water, but the best application is ice in a bladder. Embrocations with ungt. Neapolit, (ungt. hydrarg. ciner.) to the neck or head, or in the beginning of the complaint, with ungt. e tart. stibiat. in order to produce pustules on the head. Vesicatories to the neck, and kept open. The use of clysters with vinegar, assafœtida, &c. Tepid foot baths with mustard, sinapismata to the legs, &c.

47. *On Croup.*—M. **Emangard**, physician of Laigle, in which place croup is a very frequent disease, has lately published a practical treatise on that complaint. The following is a summary of his opinions, which he gives in the form of general propositions. 1st. The term *croup* ought to be restricted to angina, in the fatal issue of which there is formed on the mucous membrane of the larynx, and often even on that of the bronchiæ, a peculiar membrane. 2d. It is probable that this disease has always existed, but that the frequency of its development is subordinate to the physical education of children, submitted to the causes which produce it. 3d. It was not until the middle of the sixteenth century that a description of croup was given by Baillou, and more accurately two centuries afterwards by Ghisi and Home. 4th. It is of most frequent occurrence in northern countries. 5th. It comes on more frequently at night than in the day. It often attacks without any premonition. 6th. The cough is never wanting—it is pathonomonic; the respiration is also peculiar. These two signs are sufficient to distinguish the disease, they always appear simultaneously. 7th. The interior of the throat does not present any peculiar appearance; deglutition is easy. 8th. The rapidity of the progress of croup is very variable. 9th. The affection is essentially inflammatory; its division into species is arbitrary and useless. Little importance ought to be given to the division into periods. 10th. The duration of croup always depends upon the promptitude with which assistance is afforded. 11th. It almost always termi-

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* I have not yet employed the acidum salis oxygenatum in hydrencephalus; but upon observing its effects in other diseases, particularly in scarlet fever, we may likewise in this disease expect a successful result from the use of it.

nates in death if it is misunderstood. It is always curable if it is attacked at its commencement. 12. Patients afflicted with this disease are subject to relapses; these are often the consequences of the treatment employed. 14. The croup and the asthma of Millar are two distinct diseases, and require different treatment. 15th. Croup is a disease of infancy, but no age is exempt from it. 16th. Free local depletion, to the extent of producing paleness employed at the commencement of the disease is a true specific in croup. 17th. When the use of revulsives joined to this means is insufficient, and the disease arrives at its second stage, death in the greater number of cases is inevitable, temporizing is fatal, it is necessary to perform tracheotomy as quickly as possible. 18th. The performance of this operation is exempt from all danger.—*Annales de la Médecine Physiologique, September*, 1827.

48. *Diabetes.*—Dr. G. C. **Montani** has cured this obstinate disease by a stimulant plan of treatment. The patient had laboured under the complaint for some time, and was extremely reduced in strength, and afflicted with an almost insatiable thirst, and passed about eighteen pounds of urine in six hours; the quantity of food and drink taken in that period being fourteen pounds. Dr. M. put her on the use of stimulants, consisting of a decoction of bark, with laudanum and Hoffman's elixir; this producing good effects was persevered in for five months, when a perfect cure was effected. The patient took during that time, thirteen pounds of decoction of bark, two ounces and a half of Hoffman's elixir, besides laudanum, wine, &c.—*Journal des Progrès, Vol. V.*

OPHTHALMOLOGY.

49. *Description of a Cataract Needle.* By **Arthur Jacob**, M. D.—This instrument consists of a common needle of the size "known in the shops, as number *seven*, being the forty-fourth part of an inch in diameter, about one-half the size of the finest Saunders's needle which is made. The point can be turned to the requisite curve by means of a pair of cutting forceps, or the ward of a small key; of course without heat, which would destroy the temper. It must not however be expected that all needles are so soft as to be bent thus cold: there may not be ten in an hundred of this temper, but when once turned they retain the curve without any danger of bending or breaking, and certainly possess a degree of strength and temper, never observed in needles separately forged and finished by the best cutlers. They should always be tried before use, by passing them repeatedly through thick calves-skin leather. After they have received the requisite curve, the point should be cut flat on each side, on a fine hone, and carefully examined with a magnifying glass, to ascertain that it is perfect. The extent to which the point should be curved, may be left to the choice of the surgeon, reminding him that the greater the curve the more effectual the needle will be when introduced, but the difficulty of introducing it through the cornea will also be greater. I therefore recommend those who use it for the first time to choose one slightly curved. After the point has been turned, the needle, held in the jaws of a pair of pliers or a vice, is to be run down into a cedar handle, without cement, leaving only *half an inch* of blade, which I have found to answer every purpose. If the blade be left longer it will yield and spring when opposed to a resistance. The handle should be about a fifth of an inch in diameter, and four inches long. I use the handles made for camel-hair pencils, and find that a metallic ferule, which increases the weight, is unnecessary and objectionable. A needle thus constructed, and preserved free from rust, will retain its point for a great length of time: I have used the same one a dozen times without sharpening.

"The surgeon, provided with such a needle, places himself in the usual position with respect to the patient, availing himself of whatever assistance he may find necessary to secure the lids.* He then brings the point of the needle within a very short distance of the eye, and when the cornea is brought into an advantageous position, he suddenly strikes the needle into it near its circumference. As I do not apprehend any opacity from the wound, I am not very particular, with respect to the precise point, where the needle pierces; I generally, however, enter it sufficiently near the margin to obviate defect from this cause. The point of the needle once fastened in the cornea, the surgeon has complete command of the eye; no action of the muscles can disengage it, and there is no danger of the needle slipping into the anterior chamber; an elevator or ophthalmostat is therefore altogether useless. The operator now pushes the needle through the cornea, which frequently yields like wet leather, and the eye often turns so much toward the inner canthus that the pupil is hid, and he must rely upon his knowledge of the course which the needle necessarily takes, in order to conduct it to the lens. This is the principal difficulty to be surmounted. If the surgeon does not now steadily push the needle forward, whatever resistance he may feel, he will find, when the eye returns to its proper position, that the point of the needle is still merely entangled in the cornea. This also is the period of danger to the iris: if the operator does not keep the flat of the needle to that membrane, with the point down, and the convexity up, he will be very liable to injure it. Should it happen that the point of the needle has passed through the iris, it may be easily extricated by gently drawing back the instrument without removing it from the eye. After the needle has been fairly entered, and that the operator sees its point at the opposite side of the pupil, he brings the cornea forward, merely by pulling it upon the needle, to which it is completely secured, in consequence of the blade being wedged into its texture. He now turns the point directly back, and gently tears open the capsule, picking and scratching the surface of the lens with a rotatory or drilling motion of the instrument: not with the lever or cutting movement, which is necessary when Saunders's needle is used. If the lens be soft and friable, the fragments fall like snow into the anterior chamber, and the surgeon may deal very freely with it, pushing the needle deep into its structure, and twirling the point round so as to mash it into a pulp. If however it proves hard, and that he attempts to deal thus with it, he fixes his needle in its tough and glutinous structure, turns it out of the capsule, drags it against the iris, and makes it necessary either to extract it or force it back into the vitreous humour. If the cataract be hard, the capsule should be opened, and the centre of the lens cautiously scratched with the point of the needle, so as to expose its texture to the contact of the aqueous humour, by which it is softened and fitted for breaking up on a future occasion. In withdrawing the needle the surgeon has to encounter the same description of difficulty which attends its introduction; it is tightly held by the cornea, requiring to be turned on its axis in order to extract it, as an awl is drawn from leather. It must not however be forgotten that this wedging of the instrument is attended with the great advantage of enabling the surgeon to operate on the most unsteady eye without any ophthalmostat or elevator."—*Dublin Hospital Reports, Vol. IV.*

50. *New method of treating Amaurosis.*—M. **Majendie** having previously proved by experiment that the concurrence of the nerves of the fifth pair, are as necessary to vision as that of the optic nerves, supposed that amaurosis might sometimes arise from a paralysis of the first of these nerves, and that by powerfully exciting them, we might produce advantageous results. Being satisfied that these nerves might be punctured with impunity, and having remarked that the pupil was contracted whenever he pricked either of the orbitar branches of the fifth pair, he passed one needle into the frontal nerve, and another into the

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* Some ophthalmic surgeons recommend that the left hand be employed to operate on the right eye, supposing the operator to sit in front of the patient. I operate on the left eye sitting opposite to the patient, on the right standing behind him with the head resting against my chest; this latter position I find by far the most favourable and convenient.

superior maxillary, and connected each with one of the poles of a voltaic pile. In a case of amaurosis of one-half of the retina, accompanied with paralysis of the superior eyelid and some of the muscles of the eye, in three months the retina and muscles of the eye were restored to the performance of their healthy functions.—*Journal des Progrès, Vol. IV.*

51. *On the use of Chloruret of oxide of Calcium in Purulent Ophthalmia.* By Dr. **Varlez.**—Dr. Varlez, of the Military Hospital of Brussels, having been struck with the rapidity with which the chloruret of the oxide of calcium, when applied to ulcers, diminished the suppuration, was induced to try it in purulent inflammation of the conjunctiva, and also in the inflammation of the meibomian glands; and he has found it to be extremely useful, indeed he extols it as the most valuable remedy known in these cases. "I do not, however, suppose," says he, "that it can enable the practitioner to dispense with the other resources of art, when they are indicated by the state of the disease: it is thus that in severe acute ophthalmia, I employ copious general bleeding, frequently repeated, purgatives, calomel, pediluvia, &c. while in chronic cases I use setons, blisters, &c. conjointly with the solution of the chloruret."

Mr. Guthrie relates also several cases treated at the Royal Westminster Infirmary for Diseases of the Eye, with this remedy, which prove its utility.

The chloruret is applied in solution, in the proportion of one scruple to an ounce of distilled water; and the strength may be increased to four drachms of the chloruret to one ounce of water. This solution may be dropped in the eye, injected with a small syringe, or applied with a camel's hair pencil. When the solution ceases to be of service, he recommends that the quantity should be augmented, or its use suspended and again resumed after a time.—*Lond. Med. and Phys. Journ. November*, 1827.

52. *Gonorrhœal Ophthalmia.*—Mr. **Wishart** relates in the October number of the *Edinburgh Medical and Surgical Journal* a case of gonorrhœal ophthalmia, and concludes the account with some remarks on the character and treatment of the disease. These are for the most part very judicious, but there are two or three remarks in relation to its diagnosis, in the correctness of which we believe he will not be sustained either by observation or reason.

"The course of gonorrhœal ophthalmia is marked," says Mr. Wishart, "not only by the rapid extension of the inflammation from the lids to the eyeballs, but by the state of chemosis of the conjunctiva of the eyeball, and the rapid destruction of the anterior membranes of the eye."

Inflammation of the conjunctiva differs in its violence only, and as the degree may be influenced by the activity of the exciting cause, gonorrhœal matter, which is a very acrid secretion, when applied to the conjunctiva, generally, it is true, produces inflammation of a high grade, and which runs its course with great rapidity. But other causes produce inflammation of the conjunctiva, equally violent and rapid in its progress. Thus exposure to the heat of the days, and the light reflected from the bright sand, and the coolness of the evenings, in Egypt, excited in the soldiers of both the French and English armies during the famous campaign in that country, inflammation of the conjunctiva of a most violent grade, and which run on to destroy the eye with great rapidity. To the inflammation thus produced, the name of Egyptian ophthalmia was given, and it was erroneously considered by many surgeons as a peculiar inflammation. Between the inflammation excited by gonorrhœal matter and that produced by the above causes, no one has as yet succeeded in pointing out diagnostic characters, in fact there is no specific difference between them.

Mr. Wishart further remarks "during the whole progress of the disease, (gonorrhœal ophthalmia,) we never meet with any symptoms of inflammation of the iris; thus showing the distinction between this species of ophthalmia and the ophthalmia from true syphilis." When inflammation of the conjunctiva is produced by the application of the secretion from an inflamed urethra, when it supervenes to the suppression of this discharge, or when it occurs during the discharge from the urethra, (we adopt the definition of Mr. Wishart, though we confess we do not understand his last form or *species* as he calls it,) it is considered as gonorrhœal ophthalmia. When in like manner inflammation of the conjunctiva is concomitant with, or supervenes to syphilis, it is named by those who believe in the specific nature of that poison, syphilitic ophthalmia. The whole amount of Mr. Wishart's remarks then appears to us to be that inflammation of the conjunctiva is not inflammation of the iris. If, however, he means to say that inflammation of the conjunctiva, when occasioned by gonorrhœa, never extends so as to involve the iris, he is assuredly wrong: moreover, *metastasis* of gonorrhœa sometimes takes place to the internal tissues of the eye; three or four cases in which this occurred are noticed in the preceding series of this journal.

Mr. W. also says that ulceration of the cornea in gonorrhœal ophthalmia, "differs from all other ulcers of the cornea which are funnel-shaped and filled with pus, whereas in this ophthalmia they are extensive, unequally deep, and seem exactly as if a bit of the cornea had been torn away with a hook." This diagnostic mark is as fallacious as the others. When the inflammation in gonorrhœal ophthalmia terminates in ulceration, it is usually in sloughing ulceration, as often occurs where the preceding inflammation is very violent, and on the separation of the slough, the ulcer described by Mr. W. is left. We have seen precisely similar ulcers succeed violent inflammation produced by blows and other mechanical injuries, &c. especially in drunkards, and in persons of depraved constitutions.

53. *Ossification of the Cornea.*—The eye of an old man was lately presented to the Société Anatomique, by M. Monot, in which the cornea was ossified throughout.—*Nouv. Bibl. May*, 1827.

SURGERY.

54. *Injury received in Dissection, without the Operator being Wounded.* By Sir Astley Cooper.—The terrible consequences that have resulted from wounds received on dissection are too well known to require notice here, but it is not generally known that distressing effects are sometimes produced without any wound or abrasion upon the hands of the operator. Sir Astley Cooper says "It would seem that under certain circumstances a poison is produced sufficiently strong to excite inflammation, even when there is no wound," and he relates the following case:—

"Mr. Cook, surgeon, at Marsh-gate, Westminster Bridge, sent to me whilst labouring under the highest irritative fever, in consequence of having opened the body of a person who had died of puerperal fever. When I examined him, I found the extremities of his fingers of both hands inflamed, as if they had been dipped in scalding water, and the absorbents of his arms red, hard, and knotted to the axilla; yet he had not any wound or abrasion of any kind upon his hands, and it would therefore seem that the fluid produced in the abdomen of this woman, in which his fingers had been frequently immersed was of a highly stimulating nature."—*Lectures on Surgery, Vol. III.*

M. Bégin relates a somewhat similar case—see page 390 of this number.

55. *Periostitis.*—Dr. Casini reported to the Medico-Physical Society of Florence, at their sitting of the 10th of June, three cases of idiopathic periostitis, two acute, and one chronic, which required surgical operations, from which he concludes that the inflammation of the fibrous envelope of the bones is the principal cause of caries, of necrosis, of atrophy, and absorption of the bone. He believes the best mode of curing these diseases is to open promptly the

tumours which be does not consider to be characteristic of syphilis, as M. Montfalcon does. Having observed that periostitis, however near it approached the joints, always spares them, Dr. C. has adopted the opinion sustained by some anatomists, that the periosteum is not continued upon the articular surfaces, or that the perichondrium is an entirely different membrane from it. —*Journal des Progrès, Vol. V. from the Antologia Gior. di Sc. Firenze Luglio,* 1827.

56. *Recto-vesical Operation for Stone.* By Dr. Wenzl.—"This operation was performed with success by Dr. Wenzl, of Munich, on a young man seventeen years of age. The calculus extracted from the bladder was three inches and six lines in length, and in breadth and thickness it was two inches and ten lines: it weighed two ounces. It was composed of an external crust, formed of phosphate of lime and of magnesia; and the kernel was composed for the most part of uric acid, with oxalate of lime. The operation was attended with complete success; and the author combats the objection made to the recto-vesical method, particularly by Scarpa."—*Bulletin, &c. July,* 1827.

57. *On the Remedies employed for the cure of Tetanus.*—Sir Astley Cooper divides tetanus into two kinds; one acute, "which generally terminates the patient's existence;" the other chronic, "which, after a time, is often recovered from."

The treatment which he has seen pursued in acute tetanus, has been—

"The warm bath, which gives a temporary tranquillity, and slightly reduces the spasms; but is not followed by any permanent good effects.

"Bleeding, which hastens the patient's death; it reduces the powers of the body; and, although the spasms are less violent, they destroy it sooner.

"Opium, I have generally seen given; but, in acute tetanus, never with any other advantage than a slight mitigation of the symptoms for a short period. I once saw Mr. Stocker give, at nine o'clock in the evening, half an ounce of tincture of opium, and at eleven o'clock an ounce more, without any permanent beneficial influence. To me, it appears to be absurd to resort to a treatment which has been repeatedly found to be inefficacious.

"Tobacco injections I have seen used, but with no permanent advantage.

"Digitalis I have known employed, but uselessly.

"Ice I have seen extensively applied; but all these means, in acute instances fail."—*Lectures on Surgery, Vol. III.*

58. *On the use of Sutures to preserve the Approximation of the lips of Wounds.* By Sir Astley Cooper.—Considerable prejudice exists in this country, and we cannot help thinking with some justice, against the use of sutures. Sir Astley Cooper, however, says that "it is quite a mistake to suppose that sutures are injurious, and that they should be never used; for a wound often heals better with a suture and a cooling lotion, than with adhesive plaster. Indeed adhesive plaster should not be applied to the edges of wounds. Often have I seen it produce erysipelas, and sometimes the erysipelas followed by the death of the patient. After the removal of a large tumour from the breast, I often employ a suture to keep the parts in exact contact, and to prevent the edges from becoming inverted." Sir A. C. recommends that the thread employed should be as fine as possible, and that only as many sutures as are absolutely necessary to produce the desired effect, be inserted.—*Lectures on Surgery, Vol. III.*

59. *Case of Aneurism cured by Compression.* By Dr. A. De Winter.—In the first No. of the second volume of a periodical journal, devoted to surgery and midwifery, entitled "Der neue Chiron," Dr. De Winter gives an account of a wound of the brachial artery, made in performing the operation of blood-letting in venesection of the basilic vein of the right arm of the Queen of Bavaria, which he cured by a compressing bandage. A history of a case of false circum-

scribed aneurism of the radial artery, cured perfectly by the compressing bandage of Heden, the circulation in the artery being preserved, is added by Dr. Weissbrod, professor of the medico-practical school of Munich.—*Bulletin des Sciences Médicales, July,* 1827.

60. *Treatment of Wounds of the Trachea and Œsophagus.*—Sir **Astley Cooper** recommends that in these cases, all food, solid or liquid, should be avoided, and that the patient be supported, as long as nature can bear it, by clysters. He objects "entirely to the introduction of tubes into the œsophagus, as worse than unnecessary; for they are highly injurious by the cough which they occasion by their irritating; and if adhesion or granulation have taken place to close the wound, such tubes tear it open again, and destroy the process of restoration."—*Lectures on Surgery, Vol. III.*

61. *On Amputation and the Omission of Ligatures to the Vessels.* By Dr. L. **Koch**, of Munich.--Notwithstanding the numerous researches and experiments on the alterations and condition of compressed vessels at the place of ligature, it is surprising that the most inaccurate ideas are still entertained on the subject, and that the opinions of physicians and surgeons, on the spontaneous cessation of hæmorrhage from divided vessels, should still be so contradictory and uncertain. Dr. Koch thinks that the subject has not been studied minutely enough, or the phenomena observed with sufficient impartiality to arrive at the truth. He believes that timidity also has prevented our observing that the ligature is useless in many cases, while experience has shown its disadvantages. There are few who will amputate a limb, and fearlessly trust to nature for the security of the cut vessels. Dr. K's father, director of the General Hospital of Munich, "*has not tied a single artery in the various amputations which he has performed for the last twenty years.* To this wide range of experience, the son has added his own, in corroboration of the opinions of his father and of himself, respecting the imaginary danger of leaving vessels untied in amputations.

Arteries, says he, when cut and not tied, remain entirely open, up to the place where they are divided:—The canal of arteries tied in the usual manner remains open also to the spot where the ligature is applied, and their parietes do not unite at this spot. These observations were repeatedly made by the author's father on dead bodies, where the arteries had been cut by him, or tied by other surgeons, many years previously. He always found the diameter of the vessels that had *not* been tied, contracted as they approached the place of section, but the parietes never adherent till the artery ended in a kind of cicatrix. These things are seen in numerous preparations by the author, in the anatomical museum of Munich. The vessels that had been tied presented the same appearances, except that, at the spot where the thread had been applied, there was a narrowing, but never an obliteration of the canal of the vessel.

In a disarticulation of the hand, the surgeon had tied the radial artery, and omitted to tie the ulnar, as it did not bleed. The ligature came away on the 8th day, and on the succeeding day the patient died. On examination, the terminations of the two arteries were so similar, that it was difficult to say which of them had been tied by ligature. Both extremities were perfectly pervious—the radial artery appeared to be slightly torn at the termination.

In numerous experiments on dogs, our author could perceive no difference between the arteries that had been tied, and those that were left to nature. Thus, he tied the femoral artery of a dog, and cut the vessel below the ligature, without hæmorrhage. The wound was closed and healed. A month afterwards he killed the animal, and found the upper and lower extremities of the vessel were completely similar, each being united to an external coagulum by an open mouth.

The formation of a coagulum takes place in some, but not in all cases. But it produces the same effects in the vessels which are tied, and in those which are cut, and not tied. In ligatures of arteries, the internal coagulum is often found in connexion with the external, so as to fill exactly the orifice of the vessel. The coagulum is rarely adherent to the internal parietes of the vessel, and never completely so up to the nearest anastomosis. An amputation was performed at the hip-joint, and the crural artery was tied. The ligature came away on the eleventh day, and, on the fourteenth day, the patient died. On dissection, a clot was found plugging the artery, but the canal of the vessel was open. In a very few cases indeed was the bore of the artery found obliterated after the ligature, by adhesion of the sides of the vessel.

No doubt, says the author, "that most surgeons will stare when I propose the general abandonment of the ligature, as the means of preventing hæmorrhage, especially in amputations. They will be still more surprised when I assert, that, by this omission of the ligature, the most certain means are taken to obviate effusion of blood. Yet this assertion rests on the basis of experience, and can be testified to by all those who have witnessed my father's operations in a public hospital for twenty years past."

Dr. K. appears to think that the spontaneous cessation of hæmorrhage from a divided vessel, depends *chiefly* on some change in the blood itself—partly in retraction of the vessel. The coagulum he considers as the *effect* rather than the *cause* of this cessation of hæmorrhage. This last conclusion appears plausible; for it is hard to conceive that coagulum can form *during* hæmorrhage—and if it form after the cessation of the flow of blood through the orifice of the vessel, it can hardly be viewed in the light of a *cause* of that cessation. All that can be said in this case is, that the coagulum may prevent subsequent hæmorrhage; but this our author denies.

"The application of the ligature," says he, "in disturbing the spontaneous cessation of the hæmorrhage, acts in a manner quite opposed to the end in view. It produces, it is true, a mechanical and temporary obliteration of the bore of the artery, but this is inferior in value to the natural retraction of the vessel, and spontaneous cessation of the hæmorrhage."

This spontaneous cessation is to be aided, or rather promoted, by pressure on the trunk of the vessel leading to the part, and a gentle degree of the same on the face of the stump, either by the hand or by a proper bandage. By these means the stasis of the blood is promoted, and protection from future hæmorrhage secured.

The method pursued by Dr. K. and his father in amputations is as follows: —After dividing the soft parts and bone, the surface is sponged, and the muscles and integuments brought neatly into contact, and retained by adhesive plaster, so as to secure adhesion by the first intention, if possible. *During* the operation, the vessel is compressed by the fingers of an assistant, and *afterwards* the pressure of the fingers is rendered unnecessary by the application of a compress, laid along the trajet of the main artery, secured by a roller. The patient is then placed in his bed, and the stump kept elevated, and an assistant is directed to make gentle pressure on the face of the stump, for an hour or two—or longer, if he feel considerable pulsation in the part. "When this pulsation has ceased, and when the dressings appear tinged red by the exuding lymph, all danger of hæmorrhage is considered as at an end, provided the patient keeps quiet. Presently, the exudation of lymph ceases—and the dressings becomes quite dry and cold." The patient generally passes the first few days without fever, on which account he is allowed wine, coffee, and other food, which dare not be given under other circumstances. No opiates or medicines of any kind are usually exhibited after the operation. About the fifth day, there is generally some traumatic pyrexia evinced, owing to the suppurative process going forward in the wound; but it requires no particular treatment. A moisture taking place on the dressings about the seventh day, indicates the establishment of suppuration; but if the dressings keep dry, union by the first intention is sure to have occurred. Whether suppuration or adhesion has taken place, the dressings are never removed before the tenth day, or even later, unless violent inflammation or hæmorrhage should arise. They consider that the adhesion of the integuments and muscles is never properly consolidated before the tenth or twelfth day, and therefore that much mischief is done by too early a removal of the dressings."—*Journal des Progrès, from the Journal für Chirurgie und Augenheilkundie von Græfe and Walther, p.* 9. *t.* 560.

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62. Civiale's *Operation for Destroying the Stone.*—Dr. La Roche, of this city, has seen M. Civiale operate upon two individuals, and *explore* the bladder of a third, (who had been previously operated upon several times,) to find out if there remained in it any fragments of calculi. "In the first of the two beforementioned individuals," Dr. La Roche writes to Dr. Hodge, "the stone had been in part pulverised and broken, in some previous sittings; in consequence of which, a fragment had passed into the canal of the urethra, and was stopped within half an inch or an inch of the end of the penis. M. Civiale succeeded, by means of a pair of dissecting forceps, in breaking this fragment, and extracting it by pieces; for it was very large, much more so, indeed, than was at first expected, and so irregular as to adhere very firmly to the coats of the canal. Another, but smaller piece, was discovered a little lower down, and scooped out with the help of one of the blades of the lithontriptic forceps. This done, M. C. introduced a curved gum-elastic canula into the bladder, and through it injected some water into that viscus. I must here mention, that after the canula is removed, the greater portion of the water remains in the bladder, which I confess somewhat astonished me; for I had been induced to expect, that the liquid, by irritating the mucous membrane of the bladder, would compel the viscus to contract, and empty itself. Perhaps it is to guard against this effect, which I now suspect will only arise from the stimulus of distention, that M. C. never injects more water than the bladder can well receive with ease, and always inquires of the patient, the best judge in those matters, if a sufficient quantity has been thrown in.

"The next step in the operation was the introduction of the instruments. This as you may remember, was thought in America to be difficult, and even to constitute one of the greatest objections to the operation itself; because these instruments are straight, while the canal of the urethra, through which they must necessarily pass, is curved. Be the shape of the urethra, however, what it may, no such difficulty was encountered by M. Civiale. I will even go further, and affirm, that in these cases, the introduction was effected with more facility, and in much less time, than I had ever seen done by other surgeons, with the common curved sound; so that I am disposed to conclude, that all the objections raised against the operation, and grounded solely on the shape of the instruments, can be very easily removed by witnessing a trial of them by a skilful surgeon. After searching a little while, a fragment of stone was discovered; but, as it was somewhat small, some difficulty was experienced in grasping it firmly enough between the blades of the forceps to allow the full effect of the file. This was finally done, however, and as the stone was soft and friable, the boring was accomplished in a very few minutes. A quantity of sand mixed with water was passed out during the operation between the urethra and the sound. No difficulty was found in turning the stone when it had been bored; all that was necessary was to loosen it a little in the forceps, turn them rather suddenly, and move them about. The boring was once more resumed; after which, the instruments being removed, the patient was allowed to make water. Another operation, to which he was to submit a few days after, has probably terminated the business in this case, and rid the patient at least for some time, of his painful complaint. He appears to have laboured a very long time under the calculous diathesis; as he is now upwards of sixty years of age, and was cut at twelve years for the stone. M. C. was not a little pleased to point out to me a fistulous opening in the perineum of this man, consequent on the operation last alluded to.

"The second patient was about fifty years of age and had laboured a long time under the disease. The stone was very hard and large, and had already necessitated eight operations. Water was injected, as in the former case; the instruments were introduced with the same facility; the stone seized almost immediately, bored, turned, and bored again several times. M. Civiale did not expect to remove all that remains of the calculus, without three or four more sittings. As regards the third patient, I have already said, that M. C. merely sounded him, to ascertain if there remained any fragments of stone in his bladder. This was accomplished with the full set of instruments, so that if any thing had been found, it would have been seized at once and destroyed.

"The degree of pain, caused by the operation in the cases I witnessed, varied. In the first it was considerable, and the patient could hardly prevent himself from bearing down and expelling the water. This was particularly the case while the stone was sought after. In the second, much less pain was experienced; while the third patient seemed to suffer very much, from the motions which were necessarily imparted to the instrument, with a view of exploring the whole of the viscus. After the operation, the patients seemed very little incommoded, and, after making water, walked out as if nothing had happened. They are subjected to a suitable regimen, for preventing the occurrence of inflammation, and with the same intention they are recommended to resort frequently to the use of tepid baths.

"This method of removing the stone from the bladder, requires, as you may readily presume, a great deal of dexterity, and a considerable experience in the use of the instruments, on the part of the operator. Many of the best surgeons in France have failed in their first trials; and I am really sorry that in our country it should have been laid aside so soon, merely because those who resorted to it, were not able to wield the instruments at once, with sufficient dexterity to seize and bore the stone as readily as those who had more experience than they. As regards M. Civiale, it is impossible to see him operate without admiring the care with which he introduces the instruments, and accomplishes all the steps of the operation. It is true, that this dexterity can only be acquired by long exercise; but can we not say the same of all operations? and ought a surgeon to lay aside, in despair, and even to censure, a new, less painful, and less dangerous method of ridding a patient of the stone, because, after pushing into the bladder an improper instrument, he has failed to grasp the stone and to destroy it? I have said an improper instrument, because after witnessing M. Civiale's operations, and examining attentively his instruments, I am convinced that the failures in America arise from the improper construction of those made use of there. For example, M. Civiale's forceps, present, when closed and placed in the canula, an olive-like extremity. This is easily done; for two of the blades which are curved in at the extremity are of the same length, and placed in pretty close contact, while the third, being longer, laps, as it were, over the others, and, the extremity being curved like that of the former, forms the extreme end of the olive, and, when imbued with simple cerate, offers little or no roughness to the urethra, as it is pushed along into the bladder. In order that the blades should be of sufficient strength, they are made pretty thick, and are rather larger when closed than the canula, so that they cannot pass through the latter; and to be placed at the end of it, it is necessary to introduce their stem backwards. Into this stem is also introduced backwards, that of the rasp or file. Here, then, is a complete instrument, three in one, the extremity of which is formed by the forceps, and of the proper shape for finding its way into the bladder."

Several of the surgeons of Paris have devoted great attention to the operation of breaking down the stone, and some have made alterations in the instruments employed for that operation by M. Civiale, among others M. Meirien, who offers the following objections to those used by M. Civiale. 1st. That the olive, which the three blades of the forceps form by their union, not being complete, its introduction is difficult, and the mucous membrane of the urethra, dipping into the interstices which exist between them, may be torn, (or, as he expressed it, ploughed,) by the lithontriptor. 2d. The strawberry extremity of the lithontriptor presenting a larger diameter than the cavity of the tube of the stem of the forceps, it is impossible to introduce and withdraw it at pleasure, so that it is necessary, in order to distend the bladder, to introduce primarily an ordinary catheter, and inject water into that viscus before the introduction of the instruments, which complicates the operation. Moreover, as the water injected into the bladder always escapes during the operation, it may happen, owing to the difficulty of replacing it, that the bladder will embrace powerfully the stone and the instruments, and, in consequence of this, the surgeon will not be able to get rid of the former, and from this to disengage the instrument, with a view of withdrawing it from the bladder; or if it succeed, it may only be with the danger of pinching and tearing that viscus. 3d. This accident is so much the more to be feared, as the hooks which form the extreme ends of the blades of the forceps pass over each other, and can, consequently, the more readily seize and tear the coats of the bladder. The fear of this accident is not imaginary; for it has been found, by dissections, to have really happened. 4th. For numerous reasons, which are easily appreciated when we have the instruments before us, the stone is often with difficulty grasped, or it is seized improperly, (as, for example, by its long diameter, or by one of its extremities only,) and then it escapes very readily. This also happens, when the diameter of the stone is more than eighteen lines. 5th. When the stone is seized in the most favourable manner possible, and firmly secured, it is only in our power to bore one hole in it of the size of the lithontriptor, that is, from two to four lines in diameter. It is necessary to seize it, and loosen it a great number of times, which prolongs the operation, and, consequently, the sufferings of the patient; for the seizing of the stone is the most difficult part of the operation for the surgeon, and the most painful for the patient, who generally does not complain during the time we act upon the stone, particularly if the latter has been well isolated from the parietes of the bladder. Repetitions of the operation are always dangerous, when very frequent. 'I have found, on trial on a stone out of the bladder, that to destroy one of an inch diameter, and which is pulverized in ten minutes by means of my instruments,' (it is M. Meirien who speaks,) 'it required to be bored thirty-two times with M. Civiale's; and, even then, there remained fragments which could not have passed through the urethra. It must be noticed also, that as the stone was before me, I could place it in the most favourable positions within the claws of the forceps; which cannot, of course, be so readily done when it is in the bladder; it happens sometimes, also, that after the stone is loosened, and again seized, the lithontriptor is pushed against a part already bored, and it is necessary once more to alter the position of the stone. 6th. If, in the common operation for the extraction of the stone, in which the surgeon has it in his power to explore the cavity of the bladder with his finger, he is liable to leave fragments in that viscus, when the stone has been broken by the forceps, the same accident can so much the more readily happen in the new operation; for we do not possess in this the same means of examining the interior of the bladder. In consequence of this, it happens that patients are imperfectly cured. Of the truth of this, I have in my possession many proofs. It is, therefore, essentially necessary that the stone should be completely pulverized.'"

M. Meirien uses forceps with from six to ten blades, instead of three. "'These blades, like the others, are made of steel, separate from each other, in consequence of their own elasticity, and are brought in opposition by means of a very fine silk cord, passing from one blade to the other, at their extremity, and afterwards communicating exteriorly through the stem. The disposition of the instrument is such that I seize the stone with the greatest facility, and that the fragments that might escape from between the blades into the bladder would always be small enough to pass out through the canal of the urethra. The strength of this instrument is very considerable. It is to be remarked that in all the other instruments there exists a lever of the third species, which is the least advantageous of its kind; because the fulcrum and the power are very near each other, whilst the resistance is at a great distance, which necessitates so much force as to endanger the breaking of the blades. In my instrument, the mechanism is different. Here the power is placed beyond the resistance, by means of the silk placed at the cxtremity of each blade. The instrument is used with the greatest facility. After having introduced it into the bladder, I open the forceps, sound for the stone, and inject through the stem six ounces of water. Having found the stone, I open the instrument upon it, by merely pushing a screw, which loosens the silk; and I plunge upon the stone, which can no longer escape. I tighten the silk; the blades, in consequence, close beyond the stone, and the latter is now confined within a sort of steel basket.

" 'There is nothing in my instrument which can wound the bladder or the urethra. In order to seize the calculus, I am compelled, as in the other methods, to place my patient in a fatiguing posture. But, however, when it is once secured in the forceps, I make use of a particular kind of bed, with a peculiar screw, which can be fixed also to any table. In this screw, which can be raised and lowered at will, the instruments may be firmly fixed, so that while destroying the calculus, the patient experiences no jarring;' which he must necessarily do, when the instruments are merely held by an assistant. Like M. Civiale, M. Meirien makes use of the bow in order to put the lithontriptor in motion. 'With my instruments,' he continues, 'I attack the stone on a flat surface; I next turn it in order to destroy another part of its circumference. The turning is easily effected by loosening the stone, and allowing it to fall in the inverted cone, formed by the blades of the forceps. In this way I proceed to the last, filing the smallest fragment, and reducing the whole to powder.'

" All the instruments here alluded to by M. M. I saw; and I can vouch for the correctness of his description. They are all really very ingeniously contrived, and if they succeed as well on the living as they have done here on the dead subject, he will certainly deserve a great deal of credit for the alterations he has made in the instruments already in use: for to grind down the stone in one, or at most, in two sittings, and to leave no fragments behind, capable of forming the nuclei of future stones, is doubtless a desideratum. But time and experience alone will decide how far M. M. is founded in his high pretensions, for although he talks pretty largely of what he has accomplished, and of the ease with which he destroys in one sitting a stone of ordinary size, (which has always been the case in his operations,) we have only, so far as I know, his own word for it; whereas M. Civiale's success is known to every one, at least in France, and his operations are already very numerous."—*North American Medical and Surgical Journal, January*, 1828.

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63. *Fistulous opening into the Larynx.*—In a patient at Guy's Hospital, who had a fistulous opening into the larynx, the consequence of a wound upon the thyroid cartilage, Sir Astley Cooper raised a piece of skin from the surface of the neck above the opening, the edges of which he had previously pared: it united extremely well: and the opening was thus closed.—*Lectures on Surgery, Vol. III.*

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64. *Wounds of the Intestines.*—In large wounds of the intestines, Sir Astley Cooper recommends that the lips of the wound be united by an interrupted suture; and the intestine returned into the abdomen, letting the end of the ligature hang from the external wound, which should otherwise be closed with great care. "I well know," he remarks, "that in experiments on animals the ligature has been cut off close to the intestine, which has been afterwards closed, so as to leave the ligature to separate into the intestine. Now, I do not clearly understand that this plan in any way adds to the patient's security; but on the contrary, it increases his danger in my opinion, if the process of adhesion be deficient."—*Ibid.*

65. *Lythotomy.*—Comparative trials of three of the modes of operating for stone, have lately been instituted at the Hôtel Dieu. M. Dupuytren performed on twelve subjects the bilateral operation, M. Breschet the lateral operation on eight, M. Sansom the recto-vesical operation on six. M. Dupuytren lost none of those upon whom he operated, M. Breschet lost two, and M. Sansom one.—*Journal Universel, July,* 1827.

66. *Cancer of the Rectum.*—M. Lisfranc has performed at the Hospital de la Pitié, the amputation of a very extensive cancer, situated upon the lower part of the rectum. The disease extended transversely from one tuberosity of the ischium to the other, and its antero-posterior diameter was about two inches. The finger introduced into the rectum, reached above the indurations, which terminated two inches from the inferior extremity of this intestine. The upper portion of the tumour was very moveable, and could be drawn considerably downwards. M. Lisfranc believed that it affected only the mucous membrane. Two semilunar incisions were made around the ulcerated parts, uniting at their extremities. He dissected from without inwards, as far as the middle of the sphincter; by means of the finger introduced into the rectum, he drew down the intestine, so as to occasion the procidentia of the indurated membrane, and removed the whole with the curved scissors. The wound that remained resembled a deep funnel, and it was evident the sphincter muscles were in great part destroyed. Two arteries only were tied. The patient recovered after a lapse of three months; he retains his fæces as before, and experiences no pain on going to stool.—*Journal Générale de Médecine.*

67. *Amputation of the Neck of the Uterus.*—M. Lisfranc has performed this operation upon twenty subjects, of which number eighteen have been relieved by the operation, in several of them two years have elapsed since its performance. Of the other four two are in a fair way of recovery, and two died, one twenty-four hours after the operation, and on dissection numerous latent cancers were found along the vertebral column, and in the ovaries; the other three months after, from a return of the disease.—*Archives Générales de Médecine, August,* 1827.

MIDWIFERY.

68. "*Accouchement after the Death of the Mother.*—Dr. Klaatsch, of Berlin, has related, (in the *Zeitschrift für die Staatsarzneikunde,*) the case of a pregnant female, who was supposed to have been poisoned by her husband with arsenic, in consequence of which suspicion the body was disinterred a month after it had been buried. The fact of her having been poisoned was thus ascertained, and at the same time the phenomenon was discovered of a fœtus, about the seventh month, lying between the thighs of the woman; the accouchement having taken place after her death. To explain this circumstance, and similar cases related by various authors, Dr. Klaatsch supposes that the extrication of a quantity of gas in the intestines becomes a mechanical cause of the expulsion of the fœtus, accompanied in general with inversion of the uterus, which is facilitated by the complete state of relaxation of that organ. The same opinion was advanced by M. Deneux, in a memoir on this subject published in 1812."—*Bulletin des Sc. Médicales.*

69. *Cæsarian Section.*—Dr. Fridzt, Surgeon and Clinical Professor to the Civil Hospital at Prague, has performed this operation three times, two of which were successful; one was in a case of extra-uterine pregnancy.

Case. The wife of a Bohemian peasant, who had previously had one child, the labour perfectly natural, again became pregnant, "and gestation went on naturally till the end of the sixth month, except that the tumour of the abdomen was more projecting than usual, and inclined towards the right side. After the sixth month, the movements of the child were not sensible; the breasts became enlarged, and milk oozed from them for a short time. There was also slight uterine hæmorrhage. At the end of the ninth month labour pains came on, were very severe, but subsided, and returned at intervals of ten days till the end of the eleventh month. She was at this time taken to the hospital and examined by Dr. Krombohoff, Professor of Midwifery in the University of Prague. He found a spheroidal tumour in the vagina, and the os uteri turned toward the left side. The case was pronounced one of extra-uterine pregnancy, and the woman was conveyed into the surgical wards and operated upon by Dr. Fridzt. The incision was six inches in length, extending from half an inch below the umbilicus to the symphysis pubis. The head of the child, which presented, was extracted by a simple manœuvre. The placenta and membranes were left in the abdomen. The child had been dead apparently some time. The wound was united by means of adhesive plaster, about an inch of the inferior portion being left open for the escape of fluids from the abdomen. These were the only means employed. She was once bled from the arm, and leeches were once applied. The wound is now almost completely healed, a small fistulous opening remained only at the inferior portion, from which a healthy pus is secreted. She is now taking tonics, and is allowed meat, but neither wine nor beer. The functions are all becoming natural. Stools have hitherto been procured only by means of enemas. The countenance is animated and cheerful, the pulse small, but not irritable; the appetite good."—*Lond. Med. and Phys. Journ. Nov.* 1827.

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70. *Case of Hydatids in the Uterus.* By W. Anderson, M. R. C. S.—"Mrs. E———, of a spare habit and fair complexion, twenty-two years of age, when about three months pregnant, was much frightened by the fighting of two dogs, which caused her at the time to faint, and for some time afterwards to suffer from great dejection of spirits. This continued to increase till the period of quickening, which she states she distinctly felt; after which she gradually improved in health. The abdomen increased in size, and she seemed likely to go the full period, till about the seventh month when slight hæmorrhage came on, with bearing down pains; this, however, was checked and removed by rest, and some slight aperient and saline medicines. The hæmorrhage did not return till the ninth month, and then slightly, when I was sent for, and finding pains, I proceeded to examine the nature of the presentation. This rather puzzled me, as I had never before met with a case at all similar. It appeared to consist of a considerable collection of vesicles connected together, but perfectly yielding.

"As the hæmorrhage abated after the patient laid down, I thought it most prudent not to interfere; and in the course of an hour, after very inconsiderable pains, a large mass of hydatids was discharged, and a great quantity of fluid.

"There was no hæmorrhage after delivery, and the patient did well. Upon examining the mass, I could find but a small portion of solid substance resembling placenta, the principal part being vesicles, the size of a hazel-nut, filled with fluid, and connected together in the form of grapes, the clustering of which fruit they much resembled. They weighed upwards of five pounds.

"The patient had had two children, with which she went her full time; and I can only account for this by supposing the ovum to have been blighted at the time of the fright by the dogs, which was, no doubt, at an earlier period than the patient states, as I could find no trace of fœtus or placenta beyond a portion, having somewhat that appearance, of the size of a walnut."—*Lond. Med. Repos. and Rev. Nov.* 1827.

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71. *Obstinate Vomiting during Pregnancy.*—M. Dance is of opinion that when during pregnancy, vomiting is protracted beyond the ordinary period, that it

arises from a morbid irritation of the uterus, which together with the membrana decidua, is in a state of inflammation. He has had an opportunity in two cases of testing this opinion by post mortem examinations, and found pus and coagulable lymph between the decidua and internal surface of the uterus, and other symptoms of inflammation. He recommends the employment of decided antiphlogistic measures, applied as near as possible to the uterus, and not to the stomach, which is only sympathetically affected.—*Repertoire Géneral, No. III.*

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72. *Cæsarian Operation.*—Two cases are given in the fifth vol. of the *Journal des Progrès,* in which this operation has been performed with success. The first at the hospital at Florence, on a woman of twenty-three; this was executed in the usual manner, the woman was perfectly cured in thirty days, the child was dead.

The second was performed by Dr. Solera, of Padua, on a woman of thirty-eight; this case being extremely interesting we have extracted it entire.

Mrs. J. B. aged thirty-eight, of a good constitution, conceived for the first time, five months after a second marriage, and shortly after having taken the sulphurous baths at Aix in Savoy. The pregnancy presented nothing that was remarkable; on the morning of the 2d of May, 1825, labour pains came on, Dr. Solera, professor of clinical surgery in the civil and military hospital of Padua, was called in; he found on examination that the orifice of the uterus was completely obliterated, and presented no trace of an opening. Drs. Ballardi and Villani were called in consultation, and confirmed the fact—it was also found that there was no obliquity of the uterus, which might have deceived them in the examination, the head of the fœtus was felt above the superior strait, and as the pains continued, they resolved to wait until the next day before deciding on any operation, in the hopes that the uterine contractions would determine a natural opening in the neck of the womb. The patient was twice bled, emollient injections given, and fomentations applied on the vulva and abdomen. The patient passed a bad night, her urine flowed involuntarily in small quantities, and as the abdomen was much distended, the catheter was introduced.

On the next day, Drs. Cristofori, Fortini, and Ottoni, were also called in, and no change having taken place in the patient, it was determined to recur at once to an operation, for fear that a rupture of the uterus should take place, and its contents escape into the cavity of the abdomen. All the physicians were of opinion that the vaginal incision should be resorted to instead of that through the abdomen:—1. From the danger of inflammation of the peritoneum and escape of the waters into the abdomen in the latter operation. 2. From the necessity there would be after the extraction of the fœtus and secundines, of a new operation to give an issue to the lochial and menstrual discharges—yet the ossification of the coccyx with the sacrum, which existed in this case, contracted the antero-posterior diameter of the lower strait about half an inch, rendering it doubtful whether the fœtus could be expelled without recurrence to the forceps. But the accoucheurs did not regard this circumstance as an insurmountable obstacle, and the operation was decided on and performed on the 4th of May. The instruments consisted of a bistoury, similar in its form and size to the hysterotome of Flamant, that is, it was convex, rounded and cutting only at its extremity for about an inch and a half, another bistoury with a narrow strait and pointed blade wrapped with linen, to within a short distance of its point, a third bistoury also narrow, but probe-pointed, and a little convex on its cutting edge. The patient was placed on the edge of a sofa, her head and shoulders slightly elevated by pillows, her feet resting on two low chairs, the operator standing between her thighs, introduced the index finger of the right hand to examine the state of the uterus, and the precise spot for the incision, afterwards having placed on the inside of that finger the rounded and convex bistoury, he introduced it into the vagina, but as the finger could not cover completely the surface of the blade, and thus prevent the lesion of the surrounding parts, the operator relinquished this instrument and made use of the narrow and pointed bistoury, with this he made in the vagina a transverse incision of an inch and a half in length, and afterwards through the body of the uterus, the third incision divided the membranes, and gave vent to a turbid discharge, an assistant now raised the head of the fœtus above the pubis, and the operator with his left hand carried it as far as possible upwards—the incision was now enlarged with the probe-pointed bistoury, to two inches and a half in diameter, the labour pains soon expelled the head of the fœtus through this opening, the birth was now left to the efforts of nature, the pains continued violent, and during the morning the head of the child had advanced much, towards evening however they became feeble, and at long intervals, till finally the uterus became powerless. The next morning they were obliged to remove the child by artificial means—after the extraction of the child, which had died before the operation, the placenta was removed, and injections thrown into the cavity of the uterus. The lochia appeared, and flowed by the artificial opening. Thirty days after the operation the patient was doing well, and the opening of the uterus, which was at first a little to the right, occupied the natural position—the patient shortly afterwards perfectly recovered.

MEDICAL JURISPRUDENCE.

73. *Poisoning with Monkshood.*—"A family in the neighbourhood of Lille were poisoned by this plant, in consequence of its roots having been mistaken for those of the *Ligusticun livisticum*, a species of lovage. An old woman had been in the frequent custom of drinking a tincture of the latter plant as a cordial and remedy for pectoral ailments, and usually prepared it herself. One day her complaint being more troublesome than usual, she took an ounce before supper, another after it, and half an ounce more at midnight. She died in the course of the night. Not long afterwards, three individuals in the family drank each of them an ounce of the old woman's cordial which she left behind her. They were all taken ill in the course of half an hour. One of them had inexpressible anguish, and sense of burning in the throat and stomach, vomiting, purging, tenderness of the epigastrium and cholic, afterwards delirium, manifesting itself in loud cries and violent running; but emetics and emollient drinks calmed his sufferings, and in two days he recovered. Another man of weaker habit of body began to stagger, and appeared intoxicated, then was seized with violent vomiting, purging, and acute cholic pains, and he died in two hours. The third, a young female, complained of a sense of burning and enlargement of the tongue, and then of burning along the gullet down to the abdomen; she was soon after attacked with shivering, swelling of the face, vomiting, purging, and violent cholic, and she died in a state of great agitation, two hours and a half after drinking the cordial. The bodies were examined, and the only appearance of note was great redness of the inner membrane of the stomach and small intestines. A medico-legal examination having been ordered, M. Degland, physician at Lille, discovered that the tincture had been made of the fresh roots of the Aconitum napellus."—*Journal de Chim. Méd. July*, 1827.

74. *Extraordinary Suicide.*—"A Silesian butcher, who had for some time laboured under severe depression of spirits, surprised his wife in the very act of infidelity with one of his men. The effect was such as to drive him to a state of extraordinary distraction, in which he dashed his head several times against a wall; but finding that this did not accomplish his intention, he seized a cleaver, and struck himself repeatedly with the utmost violence on the forehead with the edge of this instrument, until at length he fell dead from loss of blood, and the violent commotion of the brain. It is conjectured, that he must have inflicted a hundred wounds upon himself before he effected his purpose.

"The outrage was committed in the presence of persons who were able to testify as to the nature of the case; but had this person's dead body been found, with marks of violence such as it bore, the conclusion, (in the absence of evidence,) must have been, that the murder had been inflicted by the hands of another person, and in all probability suspicion would have fallen upon the adulterer."—*Lond. Med. Repos. and Rev. July*, 1827.

75. *Rupture of the Bladder.*—M. Cloquet reported to the Royal Academy of Medicine, the case of a man, who, in wrestling, received a blow immediately above the pubis, from the knee of his antagonist. Severe pain, and suppression of urine followed; the catheter brought away only a small quantity of bloody fluid. The patient survived to the ninth day with all the symptoms of intense peritonitis. Dissection revealed a fissure at the fundus of the bladder, the peritoneum inflamed, and urine in its cavity.—*Archives Gén. July*, 1827.

76. *Death from Inanition.*—An Italian writer has lately given the differences in a medico-legal point of view presented in individuals who have died of hunger, or only from inanition, (giuno.) Extenuation of body and general wasting of the form are common to both; in both cases also we find the mouth and tongue arid and dry, but in death from hunger the tongue is blackened, and as it were scorched; in both also the œsophagus, stomach, and intestines are contracted, all the viscera diminished in volume as are also the sanguine and lymphatic systems—but in cases of death from hunger, the stomach and first intestines are inflamed, and often gangrenous, which is never found where death has been caused by fasting. After death from hunger, the membranes and brain are often found in a state of inflammation, this does not take place in inanition; in the latter case also the muscular fibres and most of the tissues have a silvery tint, whilst in the former they are covered with extravasations of an acrid, tenacious, black liquid; the bile is thick, and is sometimes found in large quantities in the intestines. Finally, the bodies of persons who have died of inanition putrify much less rapidly than in cases of death by hunger.—*Journal des Progrès, Vol. V. from the Annali Univ. di Med. Milano*, 1827.

CHEMISTRY.

77. "*Rheine, a peculiar Substance in Rhubarb.*—M. Vaudin treated one part of rhubarb with eight parts of nitric acid at 36°, (Baumé,) with a gentle heat and then reducing it to the consistence of a syrup, and diluting it with water, he observed that a peculiar substance was precipitated which he has denominated Rheine, and which has the following properties when dried:—It is of a yellowish orange colour, without any peculiar smell; its taste is rather bitter, and it is almost entirely soluble in alcohol and ether: these solutions become yellow by acids, and of a rose-colour by alkalies. Rheine burns like other vegetable bodies, especially starch. Rhubarb treated directly by sulphuric ether yields a perfectly similar substance: this proves that the new substance exists already formed in the rhubarb, and that it is not acted upon by the nitric acid." —*Journ. de Chim. Med.*

78. *Test for the Presence of Nitric Acid.* By Dr. Liebig.—"The following method is one devised by Dr. Liebig, for the detection of this substance, which it will effect, he says, when there is not more than a four-hundredth part of the acid present. The liquid to be examined must be mixed with sufficient sulphuric solution of indigo to acquire a distinct blue colour, a few drops of sulphuric acid added, and the whole boiled. If the liquid contains a nitrate, it will be bleached, or, if the quantity is very small, rendered yellow. By adding a little muriate of soda to the liquid before applying heat, a five-hundredth of nitric acid may easily be discovered."—*Ann. de Chimie.*

79. *Fallacy of Infusion of Litmus as a Test.* By M. **Magnus.**—"When pure water is heated for a sufficient time with infusion of litmus, reddened by an acid, it restores the blue colour. It is supposed that the heat gradually causes the free sulphuric acid, which had occasioned the reddening, to combine with the excess of alkali contained in the infusion, and thus to cause the restoration of the blue colour. Hence this preparation cannot be used to test the presence of ammonia in a solution, as water alone produces the effect anticipated from the alkali. The earthy salts contained in ordinary water also produce this effect."—*Journ. de Pharmacie.*

80. *Analysis of the Bile.* By Professors **Tiedemann** and **Gmelin.**—Professors Tiedemann and Gmelin have analysed the bile with great care, and have discovered many organic principles, and proved it "to be the most complex of all the animal fluids. They agree very nearly with Thenard as to the saline ingredients, and also with Chevreul as to the presence of cholesterine, which they appear to have detected about the same time as that chemist, and without being aware of his discovery. But they have found the picromel of Thenard to be a compound substance, consisting of resin of bile and a crystalline principle which has a very sweet and slightly bitter taste, like liquorice, possesses all the properties of sugar, except that of fermenting, contains azote, resembles very exactly the sugar of gelatin procured by Braconnot on treating isinglass with sulphuric acid—and is one of the constituents of the bile which has the property of rendering the resin soluble in water. They have allowed it to retain the name of *picromel.* Sugar of bile would have been a more appropriate term.

"The next addition they have made to the analysis of the bile is the discovery of a principle resembling the asparagin found by Vauquelin and Robiquel in the asparagus. When pure it is in the form of colourless crystals, which are six-sided prisms, terminated by four or six-sided pyramids. They are soluble in about sixteen parts of temperate water, insoluble in pure alcohol, very soluble in nitric acid, but without undergoing any decomposition, fusible, and they have a peculiar fresh taste. The *Biliary asparagin,* as they have called it, is another substance, which, like picromel, renders the resin soluble in water.

"Besides the principles already mentioned, Tiedemann and Gmelin have also found in the bile the mucus of the gall-bladder, casein, albumen, gliadine, or that part of gluten which is soluble in alcohol, a little osmazome, oleïc acid, margaric acid, acetic acid, and a new acid, the *cholic acid.* They have, likewise, found that the soda contained in it exists in the state of bicarbonate, that there is also a little ammonia, and that there is no sulphuretted hydrogen in it, as Vogel has supposed. Lastly, they infer that it contains a peculiar colouring matter, because re-agents act on bile in the same way as on the colouring principle of biliary calculi; but they have not been able to separate it.

"The *cholic acid* is procured from the alcoholic extract of bile in the form of acicular crystals. It is distinguished from other acids by a sweet taste. In its properties it resembles the uric, pyro-uric, and purpuric acids, but it has a stronger affinity for bases.

"On the effects of re-agents on the colouring principle of the bile, they have made some interesting observations, from which we shall select, as furnishing the best practical test of the presence of bile, the changes caused by nitric acid. When nitric acid is added in small successive portions to bile of every kind, it causes first a green, then blue, next violet, and lastly a red coloration, which becomes yellow on standing, or on the addition of a large excess of acid.

"The bile, therefore, appears to be an exceedingly complicated fluid. Besides saline ingredients of the inorganic class, it contains mucus, albumen, osmazome, gliadine, caseïn, picromel, asparagin, acetic acid, oleïc acid, margaric acid, cholic acid, resin, and colouring matter."—*Ed. Med. and Surg. Journ. Oct.* 1827.

MISCELLANEOUS.

81. *On Vaccination Repeated on the same Individuals.* By Dr. **Dornbluth.**—In thirty-four children, aged from one to thirteen years, and who had good scars from vaccination, a second vaccination did not produce a true pustule in one. They had only papulæ, if we except a child five years of age, who had been properly vaccinated two years before, and in whom a pustule was developed similar in its progress from the third to the eighth day to that of the vaccine, but it was more transparent, bluish, had an imperfect areola, and dried promptly on the ninth and tenth days. If we except a small papulæ in an infant who had been formerly vaccinated, no effect was produced in individuals, some of whom had been, and others of whom had not been vaccinated, who were vaccinated with the lymph of this pustule.

The results of a third vaccination of fifty individuals did not differ from those of a second; they were the same also from the reiterated vaccination of adult subjects who had been properly vaccinated twelve years and upwards before. Two of these individuals had pustules very similar in every respect to true vaccine, but they left no scar. Dr. D. has not ascertained whether the lymph of these pustules will produce a good vaccine pustule. Of two hundred and thirty-four who had been previously vaccinated, a pustule was produced in three only by a second vaccination.

Vaccination performed in sixteen persons who had had the natural or inoculated small-pox from fifteen to forty years before, produced only papulæ more or less ephemeral in their duration, in ten; in four there were false vaccine pustules, finally two others had pustules which could not be distinguished from true vaccine. Persons who had been previously vaccinated, or who had had the small-pox, on being vaccinated with the lymph from one of these individuals, had no pustules; but a child vaccinated with the lymph from the other individual took the vaccine and a pustule was produced which might serve for a new vaccination.—*Bulletin des Sciences Médicales for July*, 1827, *from the Journ. des Prakt. Heilkunde, Nov. and Dec.* 1826.

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82. *Account of a Varioloid which prevailed in an Establishment for Instruction at Berlin.* By Dr. **Stosch.**—This disease was brought into the institution by a young man, sixteen years of age, who came fifteen days before from Colberg, where the small-pox and varioloid prevailed. His disease had all the characters of true small-pox, although he had a vaccine cicatrix on one of his arms. In the space of two months and a half, forty pupils were successively attacked with the disease, which in some appeared in a mild, but in others in a most violent form, presenting all the appearances of small-pox; in others again it assumed all the intermediate grades of violence. All the individuals affected had been vaccinated in their infancy. No constant relation could be observed between the number and form of the vaccine cicatrices and the violence of the disease, some individuals with perfect cicatrices being affected in the most violent manner, while others with irregular and imperfect cicatices had it much milder. All those affected were between the ages of fifteen and eighteen years, and among these the oldest had the disease most violently.

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83. *Pharmaceutical School of St. Petersburgh.*—This school, which has existed since 1822, has recently, by the generous patronage of the minister of the interior, been endowed with a botanical garden, which soon will rival the finest and most complete of the kind in Europe. It was planned by M. Fischer, one of the greatest botanists in Russia, who is now director, and is the same who arranged the fine garden at Varinha, in the neighbourhood of Moscow. The garden at St. Petersburgh already reckons upwards of eleven thousand species and eighty thousand single plants.—*Foreign Quarterly Review, July,* 1827.

84. *Insanity.*—Dr. G. **Lostritto**, Physician to the Insane Hospital at Aversa, has given an interesting summary of the cases admitted into that institution from 1814 to 1824. He states that one thousand seven hundred and twenty-five patients were received during the ten years, of whom the greater number were in 1822–23, arising from the revolution and popular commotions at that epoch. In general there are more insane patients in the summer months—this agrees with observations made in Paris and London; as to age, the greatest proportion of cases occur between the twentieth and thirtieth years, and particularly at the latter. In Naples, males are more frequently the victims of insanity than females—this remark is also applicable to all Italy and Spain. In Naples insanity is frequently the consequence of febrile diseases, particularly of intermittents; but in general is attributable to moral causes. Monomania is the most frequent; from one thousand four hundred and thirty patients, seven hundred and eighty-three were monomaniacs. Dr. Lostritto has found that general maniacs were more readily cured than any of the other species, being about three in ten in men, and five in seventeen in woman; he also observes that more recoveries take place in April than in any other part of the year.

The relative mortality of the sexes is about equal, and the general mortality about one-fourth. The general causes of death at the hospital at Aversa are dry gangrene, exanthematous fevers, and cachectic disorders.—*Journal des Progrès, Vol. V.* 1827.

85. *Medical Statistics.*—Proportion of births. In Leghorn the proportion of births to the inhabitants are one in twenty-six—in Paris one in thirty—in London one in thirty-two—in St. Petersburgh and Copenhagen one in twenty-one. It also appears that the greatest number of births occur in January and March, and the fewest in June and August.—*Journal des Progrès, Vol. V.*

86. *Pulmonary Abscess.*—Dr. **Chambers** asserts, in the *London Medical and Physical Journal*, for September, 1827, that during the fifteen years that he has been physician to St. George's Hospital, the number of deaths from pulmonary disease has amounted to above six hundred, and that the bodies of all these persons, with a very few exceptions, have been carefully examined after death, and amongst them, according to the best of his recollection, there have been found only three cases of pure phlegmonous abscess in the lungs. During this period also, many individuals with diseases of the lungs, have left the hospital, after receiving various degrees of relief; amongst these, three or four instances of pulmonary apostema have perfectly recovered. So that out of many hundred cases of pulmonary disease, not more than six or seven have occurred of true phlegmonous abscess; of which it may be remarked, that at least one-half terminated favourably.

AMERICAN INTELLIGENCE.

Notice of the Influence of Mercury in the production of Hepatic Affections. By N. Chapman, M. D.—In a short essay on jaundice, in the last number of this journal, I omitted, in the enumeration of the causes of this disease, the influence of mercury. That the inordinate use of this mineral, may in various ways derange the primæ viæ and liver, so as to produce the icterose affections, seems to me highly probable. Many years ago, I saw an inveterate case of jaundice developed, during a protracted salivation for syphilis, which I attended in consultation with the late Professor Wistar—and within the last few months, I was consulted in a second case of it under the same circumstances, in neither of which instances, was there any reason to suspect, any previous disorder of the chylopoietic viscera. But doubting whether these were coincidences or effects, they attracted little attention at the time. More importance, however, do I now attach to them in this view, from having subsequently met with similar instances, reported by a distinguished writer. Cheyne, to whom I allude, states,* "that it does not appear to be generally known, that mercurials actually produce jaundice, though it is a fact of which I have seen, within the last two years, three striking examples." The history of these cases agrees in all essentials with that of those which occurred to myself.

It is somewhat remarkable that this fact should not have been earlier applied by me, since for several years, I have taught in my lectures, that the extravagant employment of mercury by many of our practitioners, in autumnal fever, and other diseases, must be assigned as one of the causes for the general prevalence of chronic hepatic affections in some portions of our country. Even drachm doses of calomel and copious inunctions, repeated several times in the day, constitute the practice, as I have understood, of the ultra mercurialists—and, though others do not urge it so far, there is abundant reason to suspect the too common abuse of this remedy.

More than any agent whatever, has mercury the power of exciting the action of the liver, and it is a law of our nature, that all high excitement is followed by a correspondent degree of debility. Adverting to the unparalleled application of the article in the cases mentioned, it seems to be no unreasonable supposition, that the hepatic apparatus, thus over-stimulated, should fall into collapse, and in this state of exhaustion, languor shall take place in the portal circulation, productive of congestion, eventuating in induration or more serious disorganizations. Exactly in this way, do miasmata, high temperature, and the habitual consumption of ardent spirits, operate to the same effect. Called upon to explain the modus agendi of these baneful influences, such a course of reasoning, would probably, at least, be instituted by most of the profession.

In further support of this hypothesis, I have learnt from the venerable Dr. Somerville, of the south of Virginia, who has practised medicine in that section of the country for nearly half a century, that till the enormous introduction of mercury in the treatment of autumnal diseases, hepatitis was hardly known, and since, it most widely prevails. Not a few confirmatory statements have I received from my correspondents in other parts of the United States, so that the fact seems pretty well established.

Let it not, however, be imagined, that I am opposed to the use of mercury in the diseases to which I have alluded. Great confidence, on the contrary, do I place in it, and especially in the hepatic affections. It is against its abuse I protest; and here I cannot forbear to express the opinion, that in all cases where its specific impression is desired, that the end will be more effectually attained by minute doses of it—and I am equally certain as an evacuant, too largely administered, our purposes are frustrated by the ultimate overwhelming of susceptibility, leaving the alimentary canal and liver, in the torpor of indirect debility, or inducing a pernicious state of irritation, or positive phlogosis, with an irregular febrile movement.

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* Dublin Hospital Reports, for 1818.

Its salutary effects may perhaps, under all circumstances, be mainly ascribed to the promotion of the biliary and other secretions, and failing to do this, it proves inert and unavailing, or causes such a train of deleterious consequences as above indicated. In the management of chronic diseases of the liver of every description, these are considerations which should invariably control its use, continuing or discarding it, according to the mode in which it affects the system. Numerous are the instances which I have seen of hepatitis, as well as of jaundice, in which the condition was most conspicuously deteriorated by a neglect of these practical maxims, and some, where irreparable mischief was entailed by a lengthened perseverance in this mistaken course. It will sometimes happen that mercury proving inappropriate or useless, the nitro-muriatic acid exhibited internally, and applied externally by frictions or as a bath, may succeed. But a more extended view of the subject would lead me into details inconsistent with the limits of this note.

Notice of the Efficacy of Tobacco in Cynanche Trachealis. By N. CHAPMAN, M. D.—Two years ago I was called to visit a lady in croup, whom I had frequently attended before in attacks of the same disease. Having used the ordinary remedies to a great extent without any decided impression on the case, it occurred to me that relaxation of the spasm of the larynx, which evidently existed, might be induced by tobacco, and accordingly directed the smoking of a cigar. Nausea was created in a few minutes, and I had the satisfaction to witness a subsidence of the affection, followed by an entire cure, without the interposition of any other means. Delighted with the efficacy of this very simple remedy, she has since exclusively relied on it, and in all the attacks of the disease, which have been numerous, for she is hardly ever exposed to its causes without suffering in this way, she has found it equally successful.

Every case of spasmodic croup which has subsequently come under my notice, has in the early stage to which I consider the tobacco only applicable, so readily yielded to the common measures, that I have had no occasion to give it a further trial. But in several instances of the same condition of asthma I have used it with great advantage.

Much discussion has taken place relative to the pathology of croup, whether it be of a spasmodic or inflammatory nature. It is probable that whenever it suddenly comes on, it must be essentially of the former character, as some time is required to induce phlogosis, which is the result of a much slower process. No cause, however, more rapidly promotes it than spasmodic constriction, and hence no long period elapses till inflammation becomes established. That such a view is correct, seems to be confirmed by the symptoms, the treatment, and the post mortem appearances in these cases.

Case of Tetanus successfully treated with Arsenic. By WM. J. HOLCOMBE, M. D. of Lynchburg, Virginia, communicated in a letter to Professor CHAPMAN.—"Believing any thing connected with the treatment of disease will not be uninteresting to you, I take the liberty of sending you the following history of the successful termination of a case of tetanus. It was my intention to have given you this statement much earlier, but have deferred it, with the view of further testing the efficacy of the remedy, but not having met with a case of tetanus since, I have determined to communicate it to you, as it affords additional evidence in favour of the powers of arsenic to control spasmodic action. I extract the case, from the notes taken at the time it occurred.

March 14*th*. 1820.—I was this day called to visit a patient. He was a remarkably strong, robust negro man, about twenty-five years old, and had always enjoyed good health. About two weeks ago, as he was walking across the floor in his stockings only, he stuck a common brass pin into his heel. He felt no inconvenience from it at the time, and conceived the injury to be of no consequence. A week after the occurrence, he felt some uneasiness in the heel, but not recollecting at the time, of having pricked it with a pin, the week before, he concluded it was the beginning of an affection, frequently occurring, among negroes accustomed to go barefooted, commonly designated *stone bruise*. It gave him much pain, and his mistress directed a common poultice to be applied. After continuing the poultice two days, it appeared as if there was a collection of matter formed. It was opened, but instead of matter, a small portion of a thin yellowish fluid was discharged. He became worse, some symptoms of lockjaw having supervened, and I was requested to see him. When I entered the room, I found him in a strong spasm. I inquired if there was no wound about him. The attendants answered, (to use their own language,) that he had a stone bruise on his heel. Upon examination, I found the heel somewhat swollen, with a small elevation covered with a very thin skin, under which there appeared to be a collection of fluid. I divided the skin with a lancet, and a few drops of a semi-transparent fluid escaped. The wound though small, was of a greenish colour on the outer margin, and the centre was of a pale whitish and flabby appearance. It was not larger than a quarter of a dollar; the pain in the foot was excruciating, and extended up the thigh, from thence to the muscles of his back which were very much contracted, producing a great degree of curvature in the spine. The muscles of his neck and jaw were very much affected during the continuance of the spasms, throwing the head backwards and clenching the teeth together. The muscles of his abdomen were likewise very rigid, and to use his own expression, "there seemed to be a constant pulling at his heart." These spasms were not constant, but occurred every half hour, and continued about five minutes, after which he was comparatively easy until they returned. His pulse was rather small and frequent, affording but little resistance, upon pressure, to the fingers. His skin rather below the natural temperature, he had no thirst or any other symptom indicative of febrile action. Being fully satisfied that it was a genuine case of tetanus, I made two deep incisions crossing each other in the centre of the wound. I then with a probe, filled the incisions thus made, with lint wet with spirit of turpentine, and directed that the whole surface of the wound should be kept moistened with the same. I ordered a blister to be applied, covering the foot and extending upon the leg above the ankle. I then directed ten drops of Fowl. sol. arsenic, combined with fifteen drops laudanum in a little water, every two hours; also one grain of calomel upon the intervening hours.

15*th*.—I found the spasms recurred not so frequent, but equally as severe as they were yesterday. The blister drew well—the wound had lost its greenish colour, and now appeared red. No matter discoverable—pulse and skin as yesterday—no evacuation from the bowels. Prescription the same.

16*th*.—Has had but few returns of the spasm in the last twenty-four hours. The wound begins to matter. The calomel has operated twice. His pulse fuller and softer, and more regular. Complains of some heat about the stomach, and has some thirst. Skin warmer than natural, with slight moisture about the head and chest. Spirit of turpentine to the wound—eight drops arsenic—ten laudanum every third hour through the day. One grain of calomel every third hour.

17*th*.—Still continues to mend. No return of spasms since I last saw him. The wound matters freely. Pulse regular. Bowels open. Calomel has not

Plate 2 vol. 1.

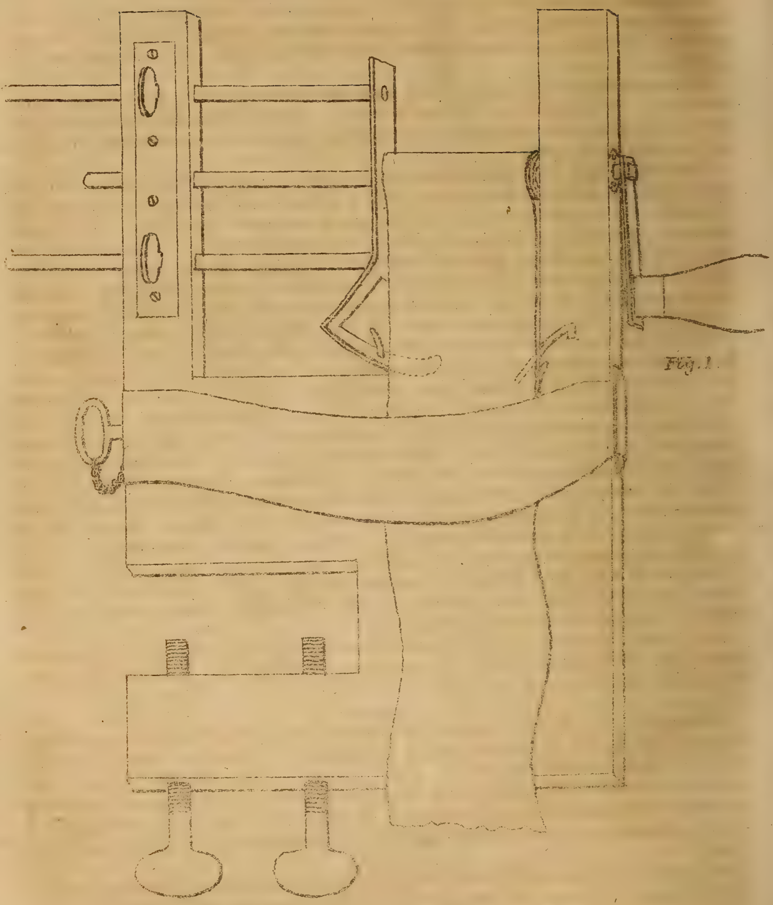


Fig. 1.

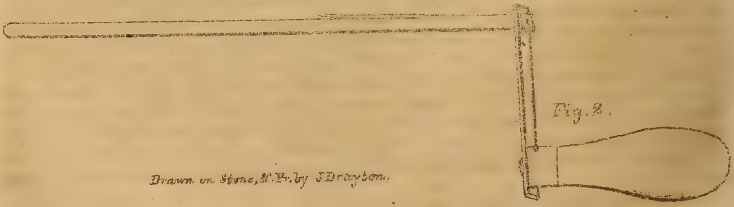


Fig. 2.

Drawn on Stone, N.Pr. by J.Drayton.

affected his mouth. Skin hot. Some burning in the stomach with a good deal of thirst. Directed simple cerate to the wound—five drops arsenic, and eight of laudanum, every eight hours. Calomel discontinued.

18*th.*—No return of spasm. No pain. Pulse regular—skin pleasant. Some thirst. Burning about the stomach not so great as yesterday. Wound healthy. Directed moderate dose calcined magnesia. Other remedies discontinued.

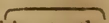
19*th.*—Medicine operated twice, and patient doing well, with some appetite to-day for animal food, for the first time. Directed his bowels to be kept open with magnesia or some of the neutral salts. In a short time he commenced his usual labour.

The above case of tetanus is one of the few, within my knowledge, that has terminated favourably when arising from a wound. Whether the cure is to be attributed to the arsenic alone, future experience must determine. It appears at least to deserve particular attention, as no remedy should be neglected that promises any benefit in this truly alarming disease. What share the blister may have had in relieving the patient, I am unable to determine, but it seems from his speedy amendment, that it may have contributed in good measure to relieve that peculiar nervous irritability upon which the disease depends. The particular manner in which the arsenic operates is not very intelligible, for in this case there was some amendment before the patient complained of any burning about the stomach, but the spasms did not subside entirely, until that symptom was developed. I am induced to believe that it operates by producing a stimulating effect upon the stomach, and extended by sympathy to all the muscles affected. I think I am warranted to draw this inference from the fact, that so soon as this patient complained of a sense of heat at the pit of the stomach, the skin which was before rather cooler than natural, became warmer, with a slight disposition to perspiration. It is worthy of remark in this case, that the calomel produced nothing like ptyalism, and if of any benefit, must have been simply as a cathartic. The particular manner of its operation is only interesting as a subject of speculation, but that it may be made, (to say the least of it,) a valuable auxiliary in the treatment of this formidable disease, I am fully satisfied."

Dr. Taylor has communicated to Professor Chapman some cases of tetanus cured by the arsenic. Vide Elements of Therapeutics, by N. Chapman, M. D. &c. Vol. II. ed. V. p. 477.

Description of a Bandage Roller, with some Remarks on Bandages. By W. E. Horner, M. D. &c. [With a plate.]—The annexed print represents a small machine for rolling bandages, which I have employed for several years in my private business. Its advantages are the celerity of its operation; and the smooth, hard, regular and cylindrical form which it gives to the bandage, all of which conditions are indispensable for its application with neatness and precision.

A glance at the drawing will make the reader understand that the machine consists in a windlass, and a frame-work upon which the latter revolves. The windlass represented by fig. 2d, is a cylindrical wire of three lines diameter, with a slit an inch and a half long sawed in it near the handle, for fastening the end of the bandage. The complete machine is seen in fig. 1st, with a bandage adjusted for winding up. In the lower part of fig. 1st, is a notch with two vertical screws for fastening on the edge of a table. To the left of the bandage is seen a rack which may be slid inwards or outwards so as to be adjusted to a bandage of any width from half an inch to six inches, when adjusted it is retained in its position by screws pressing upon its horizontal bars.

Above the notch is a transverse band, moving upon a joint on the right side, and fastened by a pin at the left. The band is made of sheet-brass, and its object is to increase the friction of the bandage by crossing and pressing upon it as it is rolled up; its inferior margin is a paraboloid curve which assists most materially in spreading out the bandage from the middle to the edges, and taking out of it any wrinkles. The edges of the bandage are kept stretched and smooth between the strap and the windlass by two arms, one on each side; that on the left is connected with the rack, and moves with it; that on the right is fixed to the frame; they have the effect of giving to the bandage as it goes up to the windlass the shape of a line with the ends advanced  which seems necessary to communicating smooth uniform extremities to the roller as the winding is proceeding.

The frame of this machine is thirteen inches in its long diameter, and eight in the short one; it is made of mahogany, and strengthened by brass braces at the places where it is subject to a strain, as at the angles of the notch and at the screws for fixing the rack. Its portable size, and the facility with which it may be fixed to any common table, make it a very convenient instrument in all dressings requiring a succession of long bandages, as in fractured clavicle, and in varicose veins of the leg. A roller, ten yards long, and in the most wrinkled state, is wound up smooth in a very short time. When the roller is to be detached from it, one or two reversed turns of the windlass frees the internal end of the bandage, and then the windlass may be easily drawn out from it.*

While on the subject of bandages I may be permitted to state that it is a very great improvement on them in many diseases, and especially where it is desirable that the limb should be well supported, and not cramped, as in varicose ulcer, for the bandage to be cut *bias*, so called by the seamstress, or diagonally. Common muslin answers perfectly well, and the division of it should commence by turning down one corner to the full length of the square. The true diagonal line being thus obtained, it may be cut up into parallel strips. The selvage ends of which being sewed successively together will make a bandage of any desired length. In cutting out the strips, allowance should be made for their narrowing about one-third upon being first stretched. For example, if a bandage of two inches is wanted, it should be cut originally three, and so on of other dimensions.

The elasticity of this diagonal bandage and its comparative comfort may be tested in a few minutes by any one who will have one arm tightly wrapped by it, and the other by the common rectangular bandage. I have frequently reconciled people to it who could not be persuaded to the permanent use of any other; and in addition to other advantages, it holds its place better, does not press at the edges, and does not ravel. The repeated advantages that I have derived from it in varicose veins induces me to recommend it to the profession as well worthy of attention.

Case of Twins, by A. Deleon, of Camden, S. C., communicated in a letter to Dr. Hays.—The following case may not prove altogether unacceptable, it did not fall under my immediate observation, I am indebted to my intelligent friend, Doctor E. H. Anderson of this place, for the facts and the preparation which he had the kindness to send me.

A healthy wench, aged about twenty-three years, was taken in labour at the full period with her third pregnancy. The pains were regular and effective, the vertex presenting; on the membranes giving way, the head engaged in the superior strait, where it was delayed; the uterine contractions increasing in frequency and severity without advancing the head, alarmed the "old woman," her fears were augmented on discovering a round body in advance of the vertex, which she concluded "was attached to the head," and from which she drew the most awful presages and sent off for assistance. This truce, no doubt, spared the uterus much unnecessary violence, and being let alone, (before my friend arrived,) it expelled, unassisted, a large healthy child, and with it, a blighted fœtus, its membranes and placenta. The secundines of the living child soon followed. Was this a twin case, the product of the same conception? Was one of the fœtusses blighted in the earlier months of gestation and retained to the full period, without affecting the healthy action of the uterus? —It might be contended, that this was a case of superfœtation. The description of the preparation and appearances on delivery will dispel this conjecture, at all events it will go to prove that it had been long retained after its destruction, by a passive consent of the uterus, for during the whole period of utero-gestation there had been no effort at expulsion.

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* This machine is made by Mr. Schively, surgeon's instrument maker, of this city, to whom the pattern has been communicated.

The following appearances presented: The colour of the fœtus, dull yellow; structure soft; cuticle and muscles easily torn on being handled; length from the posterior fontanelle to the heel, eight inches; length of the trunk, four inches; depth of the thorax, four lines; right parietal bone, trunk and extremities, flattened; left side of the head natural; extremities extended and elongated; posterior surface from the occiput to the heels, *firmly attached* to the investing membranes; superior extremities tied down to the sides of the trunk; internal organs soft and white; loose portion of investing membrane, natural; portion attached to the fœtus, dull yellow colour, firm, and dense: Placenta changed in shape and structure, tough, thick, and cellular; shape an irregular square; colour of exterior surface, bright yellow; interior, composed of strong bands running in various directions; meshes containing dark coagulated blood; the inner surface of the amnion and placenta, exhibited traces of recent circulation; umbilical chord soft, usual length, connecting the fœtus to the placental mass, of the dead colour of the fœtus; no smell of putrefaction, although examined several hours after expulsion. The flattened appearance of the fœtus bore the impress of long pressure, and was certainly not produced in its passage through the strait.

I am of opinion the destruction of the fœtus was completed, if not commenced, by the vigorous child impinging on its fellow, consequently checking by its pressure its further development, and at last destroying it. I hazard this conjecture from the fact, that adhesion could not have taken place between the fœtus and investing chorion without a fixed and steady contact, maintained by the increasing bulk of the living child—in proportion as the healthy fœtus continued to be developed was the pressure increased, producing irritation and ultimately, death; when the dead matter ceased to oppose its encroachment, it yielded as far as its form and structure would permit, hence the elongated and flattened appearance of the head and trunk, and extension of its limbs. The structural changes in the placenta, must have been gradual and progressive; it commenced with the early vicissitudes of the blighted fœtus, and when that refused its proper nourishment, it had no longer to perform an important function; and had to accommodate itself to the change—this it effected, but in what way it is impossible to determine; it continued to adhere to the uterus, and maintained a circulation, after the death of the fœtus it was destined to nourish.

Case of Excision of a part of the Spleen. By W. B. Powell, M. D. of Ky. —In the latter part of May, 1826, J. F. was stabbed in the left side, about four hours previous to my seeing him. I found the wound covered with soot and flour, which the matrons present had applied to stop the hæmorrhage. The patient was quite ungovernable from inebriation. After cleansing the wound, I found nearly two inches of the spleen protruded through an incision that had been made between the second and third false ribs, about four inches anterior of the spine, by a knife or large dirk, directed downwards, inwards, and forwards, to the cavity of the abdomen. Upon inquiry, I learned that the individual had eaten, as well as drank, but a short time before the riot, to an intemperate extent. Having satisfied myself with regard to the nature of the protrusion, I intended to attempt its reduction, but was prevented by discovering a slit in the protruded extremity, near one inch in length, which induced me to believe that such an act would endanger the patient's life from internal hæmorrhage; though but little blood followed the wound, in consequence of the stricture by the lips of the wound. Hence, as the night was considerably advanced, having no other light than that of a very indifferent lamp, the patient being intoxicated, and having no disposition to pass a ligature and amputate upon my own responsibility, I deferred doing any thing more until 9 o'clock next morning, when I was accompanied by Dr. Bennett, of Newport, Ky. At this time we both examined the case, and were satisfied that the protrusion consisted of one extremity of the spleen, in a high state of inflammation. In consultation, Dr. Bennett thought that we could institute no practice that would result in the recovery of the patient, from the complicated character of the wound, and the patient's habits of intemperance; hence, in his opinion, it was of no importance what was done, as he believed that death from peritoneal inflammation would ensue before the termination of the fourth day.

From my own views of the animal economy, the evidence of others, relative to operations involving the peritoneum, and my own experiments upon inferior animals, I was induced to believe that a more favourable result might be hoped for. The patient was about thirty years of age, possessing but little nervous irritability, and had not prosecuted his habits of intemperance to the production of organic, or even manifest functional disease; consequently, I considered his system as possessing strong recuperative powers.

With such views of the case, I prepared a ligature from a slip of a tendon, taken from a beef's hock that had been some time in brine, and passed it around the stricture formed by the external incision, and then amputated the protruded portion. I then attempted to make a perfect reduction of the spleen, but found it impracticable, without the use of injurious force, to get the amputated extremity of the spleen below the diaphragm, because of the great contraction of that muscle.

Believing, as I did, that his system was competent to the removal of that portion of the spleen contained above the incision made in the diaphragm, I did not hesitate to let it remain, as it was reduced within the thoracic parietes; hence, I closed the external wound, took a pound and a half of blood from his arm, put him to bed, prescribed light diet, and an absence from company.

On the third day his pulse, skin, &c. indicated an unusual degree of constitutional excitement, when I ordered tartris antimonii with the sal. soda, in small doses, and bread and milk poultices to the wound. On the fourth day healthy pus was discharged from the wound; this discharge continued three days, and then, (I suppose,) it was discharged internally, producing or followed by symptoms of peritoneal inflammation, which yielded to the administration of the above named medicines, with warm fomentations and evaporating lotions to the abdomen. After this he continued to improve, and on the fourteenth day was discharged from my care, though the wound was not entirely cicatrized. I saw him nine months after, when he informed me that the wound was perfectly healed, and that he enjoyed excellent health.

Case of Femoral Aneurism of the Left Thigh, and Popliteal Aneurism of the Right Leg, Successfully Treated. By Valentine Mott, M.D. Professor of Surgery in Rutgers Medical College, New York.—L. P. about thirty years of age, having lived very freely, and suffered from a syphilitic taint, felt suddenly a painful sensation in the upper part of the left thigh, from a violent effort at lifting. A tumour immediately arose which was extremely painful, having the characteristics of aneurism. Some considerable time after this, upon drawing on his boot suddenly, and stamping his foot violently upon the floor, a popliteal aneurism was produced in the right leg.

The popliteal aneurism increased the most rapidly, but though urged to submit to the operation in the early stage, he would not consent until it was upon the point of bursting.

The femoral artery was tied at the usual place, and the next day a discharge took place from the tumour.

Fourteen days from this operation the external iliac very high up was tied for the femoral aneurism of the left thigh, it having suddenly become diffused during the preceding night, extending nearly up to the internal iliac, and giving the patient the most agonizing torture.

From the opening of the popliteal aneurism a large ulcer was left, which upon healing occasioned a slight contraction and lameness. In other respects his recovery was complete, and he now enjoys a better state of health than he has known for years.

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GIBSON'S *Improved Trephine.*—Professor Gibson, in consequence of having seen much mischief result from the practice of rasping the pericranium, and from the teeth of the saw of the common trephine when applied in the usual way, has had constructed a "trephine with a small moveable lancet attached to its outer surface, the extremity of which can be made to project about the sixteenth part of an inch beyond the teeth of the instrument. The object of this is to cut the pericranium instead of tearing it. As soon as this is accomplished, the operator may retract the lancet and proceed to saw the bone."—*The Institutes and Practice of Surgery, by Wm. Gibson, M. D. &c. 2d Ed.*

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Report of the Committee appointed by the Philadelphia Medical Society to inquire into the remedial value of the more prominent specifics now sold in Philadelphia.—The Philadelphia Medical Society have just published the very elaborate report of their committee appointed to inquire into the remedial value of the more prominent specifics now sold in Philadelphia. We have not room for the whole of this report, but we insert several of the more important of the documents obtained by the committee.

Letter from Professor Chapman.

Excepting "Swaim's Panacea," I have no knowledge of any of the nostrums to which you allude in your communication to me. Early in the history of that article, I was induced to employ it, as well from professional as common report in favour of its efficacy, and was well pleased at the result in several cases. But more extensive experience with it, soon convinced me that I had overrated its value, and for a long period I have entirely ceased to prescribe it.

As to its composition, I have satisfied myself, and by no equivocal evidence, that it essentially consists of a saturated decoction of sarsaparilla, with corrosive sublimate, and that it is an inferior preparation to the syrup de Cuisinier, principally constituted of these two ingredients, and which is now so much used in the practice of this city.

It were easy to point out, and indeed to demonstrate, the great mischief which has resulted from the indiscriminate employment of this nostrum, and I am in possession of not a few cases, which, if you wish them, are at your service, eminently calculated to alarm the public on this subject.

(Signed) N. CHAPMAN.

Philadelphia, Sept. 29, 1827.

Letter from Dr. Harris.

Though I have never prescribed Swaim's Panacea, yet I have witnessed the effects of its exhibition in diseases of various characters.

The first case was Mrs. E. who was affected with herpes exedens of the nose. The case had been under my care at different times for two years, during which period I succeeded in healing the ulcer several times. She afterwards resorted to Swaim's Panacea, with the effect of aggravating the ulcer, and of producing an unyielding diarrhœa. It is now seven years since she placed herself under the care of Swaim, since which the ulcer has continued to increase in size. In this case the nostrum proved injurious to the local disease, and induced an impairment of the general health, from which she has never recovered.

Second Case.—Captain L. affected with indolent ulcers of the leg, took ten bottles of the Panacea without the slightest benefit.

Third Case.—Mr. K. a scrivener, afflicted with dyspepsia, applied to Swaim for relief. As might be anticipated, the Panacea was prescribed. After he had taken the second bottle he became salivated, and shortly afterwards appeared a mercurial eruption on his shoulders and face. Upon showing the eruption to Swaim, he expressed his satisfaction at its appearance, and added that his "medicine was driving the disease out through his skin." He encouraged his patient to persevere with his medicine until he had taken a few bottles more. The effect was an increase of the salivation, and an extension of the cutaneous disease, until it covered nearly the whole surface of the body.

After being under the influence of a profuse salivation for three months, which, besides producing mercurial ulcers, emaciated his body almost to a skeleton, he applied to my friend Dr. Mitchell and myself, for relief. We were unable, however, to render him any important service. The long irritation of the medicine brought on ascites, of which he died in a few months.

I have seen it applied in several other cases, but in no instance with the slightest advantage.

(Signed) THOMAS HARRIS.
November 8, 1827.

Letter from Dr. Randolph.

Owing to fortuitous circumstances, the celebrity obtained by various empirical articles now sold in this city, has been such, that in all probability, there is scarcely a single physician engaged in the practice of his profession, who has not had some opportunities of witnessing their effects. As our attention has been but so very lately officially drawn to this subject, I regret to state, that I cannot furnish you with any certified testimony of my knowledge of these articles, but as far as my own evidence will avail, it affords me great pleasure to comply with your request. In consequence of the panacea of Mr. Swaim having met with a more ready sale than many other similar remedies, (but with how much justice I do not pretend to say,) it has happened to me most frequently to have known this article administered. The diseases for which I have seen it given have been cases of cancer, scrofula, and bad ulcerations seated on various parts of the body; now for the cure of these complaints, I have known this preparation to be used for weeks, and months, and I do most conscientiously declare, that I have never known in a single instance a cure to be effected by it. That as an innoxious alterative it may have succeeded under circumstances where such remedies generally do succeed, particularly where active medicines have been pushed too far I can readily admit, but that it ever has effected a cure of either cancer or scrofula, under my own observation, diseases to which it is said to be particularly adapted, I certainly deny. With a view of explaining what I believe to be the mischievous tendency of quack preparations, and any adventitious aid given to their use, I beg leave to mention the following case, which came under my notice in February last. Mr. A. B. applied to me at that time, to know whether I could do any thing for the relief of a very troublesome discharge attended at times with a good deal of pain, which issued from the urethra, and which he supposed to be a gleet in consequence of a gonorrhœa which he had some years before. Upon inquiring into the symptoms of this case, I had no doubt that the cause of them all was a structure of the urethra, and accordingly I passed a bougie into that canal, which confirmed my suspicions immediately, the cure was accomplished by the usual mode. During the course of treatment this person informed me that he had been under the care of several different empirics, and that he had expended a large sum of money in the purchase of a celebrated panacea. Upon my asking him how he could have committed so great a folly, he informed me that he was led to it by the respectable vouchers which he saw given to its proprietor; I soon satisfied him that this was not a case to which they considered the article applicable, and had to regret that they could not enable the public to discriminate between cases which they were of the opinion could or could not be benefited by its use. I have attended several cases in conjunction with Dr. Physick, of ulcerations and scrofula in which the panacea had been largely administered. The sentiments of Dr. Physick respecting the use of empirical preparations, are now I imagine, generally known; his opportunities of witnessing the result of their employment have been, perhaps, equal to those of most others; now it may seem a little singular, but it is at the same time strictly true, that the whole of his experience is decidedly unfavourable to the exhibition of all such articles, and he allows me publicly to declare, that he never has seen a single case of either scrofula or cancer, cured by the administration of panacea or catholicon, and that he entirely disapproves of their exhibition in any shape whatever.

(Signed) J. RANDOLPH.

Philadelphia, July, 1827.

Letter from Dr. Coates.

Such extensive mischief has resulted to the public, and more particularly to the poorer classes of the community, from the countenance injudiciously given to various empirical nostrums, by members of the medical profession, that it becomes the duty of every one who regards the proper interests of society, to expose, as far as possible, the fallacy of the evidence urged in favour of their *miraculous* powers. With this view, I tender you the following remarks—

Mr. Swaim, armed with a certificate, signed by Dr. William Price, and another by Samuel Mason, the one at the time a Surgeon, and the other a former steward of the Pennsylvania Hospital, has asserted, that his Panacea received the sanction of the Surgeons of that Institution, and that its effects were attended with the happiest results in those cases in which it was employed.

The facts of the case are these. By the express desire of Dr. William Price, the two managers then on duty permitted a trial of the Panacea, under the superintendance of Mr. Swaim.

This permission was necessary, on account of a law of the Hospital, which prohibited any practitioner from interfering with the treatment of the patients, unless he was regularly elected an officer of the institution; and, as the introduction of Mr. Swaim, did undoubtedly give great offence to some of Dr. Price's colleagues in office, the step could not have been taken without the sanction of the managers. But, in granting this sanction, those gentlemen transcended their prerogative, and encroached upon that of the board.

The remedy was employed regularly, in only two cases that I can recollect; and one other employed it after leaving the Hospital. The former, to whom the certificate of Dr. Price refers, were, Mrs. Tregomain, a woman of a scrofulous diathesis, affected with extensive ulceration of the hand and cheek, apparently resulting from disease of the periosteum; and Owen Laughlin—with necrosis of the upper jaw, on the left side.

In the absence of my senior colleague, Dr. T. H. Ritchie, those patients fell properly to my care, as House-Surgeon, some time before their discharge; but, as I was unwilling to associate myself in any manner with Mr. Swaim, I took no charge of those cases, merely contenting myself with silently watching the progress of the disease.

That Mrs. Tregomain improved under the use of the Panacea, is certainly true, and that she left the house nearly well, is also true; but I can only account for the unqualified language of Dr. Price's certificate, by supposing that his sanguine admiration of a remedy, which shortly after led him to Europe, as its avowed disseminator, must have induced him to believe, too readily, and without sufficient examination, the apparent proofs of permanent cure, for I well recollect to have seen a *discharge from one of the ulcers on the cheek the very day of her quitting the Hospital.* Add to this, that Mrs. Tregomain assured me that her disease had been nearly cured at several different times, previous to her admission into the Hospital; and that, at the time of commencing the use of the Panacea, she had been for some time improving by the effect of other remedies: and we shall be inclined to doubt the very superior agency of the nostrum in this case.

This unfortunate woman went to Charleston or Savannah, with a professed, but illegal protector, who died there; and she subsequently destroyed herself by taking laudanum. I was informed by a gentleman who had received a letter from her landlord, during the inquiries growing out of the refusal of several spurious drafts of her companion, on a wealthy house in this city, that her despair was the result of her inability to gain a livelihood, *in consequence of the condition of her hand, which was "covered with sores."*

With regard to the case of Owen Laughlin, my recollection is clear, that I was astonished at the employment of the Panacea, in a case that must speedily terminate favourably by the powers of nature. The patient had a necrosed jaw, with the sequestrum loose. It came away in a short time, as might have been expected, and the patient recovered.

The same remedy was also employed in the case of a seaman, by the name of Anderson; but this patient was not placed under my eye, and I have no recollection of it.

Robert Ryan, to whom the certificate of Samuel Mason refers, was affected with necrosis, which destroyed nearly all the shaft of the bone; he generally enjoyed good health during the periods which elapsed between the removal of the sequestra; and at these times he officiated as an assistant in the surgical wards: so that the picture of misery which he is said to have suffered during the whole time of his residence in the Hospital, is certainly drawn in colours far too deep for nature. Robert suffered exceedingly at times, when a sequestrum was loosening rapidly, as occurred perhaps two or three times a year, during four or five years that I watched the case—at other times he was a gay and lively man, having no more pain to contend with, than is usual in necrosis. His last sequestrum came away while I was absent; but I have been informed, both by his physicians and himself, that, on this occasion the entire upper part of the dead shaft of the bone was removed, and Robert recovered his health with great rapidity. During this convalescence he commenced the use of the Panacea, and perhaps the most that can be said, is, that it did not retard the cure.

Thus it will be seen, that the Panacea has never been properly introduced into the Pennsylvania Hospital; and that the few cases in which it was employed were ill selected, and of doubtful result.

(Signed) R. COATES, M. D.

Letter from Dr. Griffith.

The only quack medicine alluded to in your circular of June last, of which I have been enabled to judge, is "Swaim's Panacea." This I have seen administered in several cases, generally without producing any beneficial effects. In one case, however, of obstinate and ill conditioned ulcers, it was certainly of use. Of its dangerous nature when taken without due attention, I met with a melancholy instance soon after its introduction. In 182–, I was called to a man, at that time residing in Blackberry Alley, said to be dying of a hæmorrhage. I found him discharging great quantities of blood from his mouth and nose, and threatened with suffocation from his inability to rise. The flow proceeded from large and deep ulcerations of the mouth, which implicated several small arteries. By the usual means, the hæmorrhage was arrested. On inquiry, I found that he had been afflicted with rheumatic pains, for some time, for which some friends had recommended Swaim's Panacea: he had taken about three or four bottles, when it produced a violent salivation, which ended in extensive sloughing of the jaws. He declared that he had taken no other medicine. Next day, I requested Dr. Hays to see him with me, which he did. The man remained in a tolerably comfortable situation for a day or two; when the hæmorrhage again occurred, and, before any assistance could be rendered, he sank under the discharge.

(Signed) R. EGLESFELD GRIFFITH, M. D.

Letter from Dr. Jackson.

The first knowledge I had of Swaim's Panacea, was in the winter of 1821–22. My younger brother, from an injury received in the ankle joint, had long been labouring under a chronic inflammation of its ligaments, and probably its cartilages; and which eventuated in anchylosis. A small sinus remained, from which was occasionally discharged a sero-puruloid fluid, never exceeding a few drops at a time.

A zealous partizan of the Panacea, became very urgent that my brother should give it a trial. Satisfied that no means could remedy the condition of the joint, and that time, with warm weather, to admit of exercise, was alone required to restore his general strength, I was opposed to the quackery that was so much desired. At this time, a young lad of this city, Master W., was taking the Panacea, for a disease of the hip-joint; and, it was asserted boldly, was recovering from its employment. In a few months after, however, he died. A man whose neck was covered with scars, said to proceed from ulcers cured by the Panacea, was brought to my brother and the family, as a specimen of its wondrous powers. These means created so powerful an impression on the minds of my brother and mother, that they became very solicitous to employ it; and, believing no harm would probably result from its use, I withdrew my opposition, and my brother commenced taking the Panacea. I examined the first bottle that was procured; and immediately pronounced it to be the syrup of Cuisinier, a remedy I had been accustomed to prepare, and prescribe in old cutaneous ulcerations, and syphiloid affections. My opinion was, however, attributed to professional prejudice.*

At this time, Mr. Swaim requested me to accompany him to visit a patient in Kensington, affected, as he said, with a cancer, and who was about to commence with his medicine—that I might be satisfied of its powers. This patient was Mrs. Hooker; whose case is detailed very imperfectly in Swaim's pamphlet of "Cases cured, &c." page 37; and of which a certificate was given by the late Dr. Knight.

This woman I found under a horrible salivation, brought on by an excessive use of mercury. She had been placed under this treatment by Dr. ———, of the Northern Liberties; in consequence of blotches and pimples appearing on the skin, succeeding to delivery. She had taken, according to her account, an immoderate quantity of pills, which appeared to me to contain corrosive sublimate.

At the time I saw her, the saliva was running in an incessant stream from her mouth. The fauces and gums were ulcerated, and a large ulcer existed on one of the feet. Her disease was clearly mercurial, and brought on by her attending physician.

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* In my brother, no marked effect resulted from the Panacea at first. It was continued until he had taken six or eight bottles. While under its use, a slight cough came on that was attributed to cold: it grew worse; became unyielding; and finally, the unequivocal symptoms of tuberculous phthisis were unfolded. Early in the spring, the expectations that had been built on the amiable character, and promising talents of this youth, were blasted by his death. I have frequently reproached myself with consenting to the experimental quackery in his case; and have apprehended that the development of tubercles in the lungs, was the consequence of the irritation of the corrosive sublimate of the Panacea, in a constitution strongly disposed to scrofula.

I assured Mr. Swaim, he would find no difficulty in curing that case, and the first step towards it was throwing her box of pills into the fire: good nourishing diet, even without his Panacea, would complete the rest. The infant of this woman was emaciated, from the ill condition of its mother's milk; but I do not recollect that it had any ulcerations on its surface.

Returning from our visit to this patient, I told Mr. Swaim, I was satisfied his Panacea was the same as the syrup of Cuisinier; the mode of preparing which I mentioned to him: he turned round, and asked me if I "told that to the doctors."

The next case that fell under my notice, in which the Panacea had been employed, was that of a lady of this city, who sent for me on account of a violent ophthalmia, with which she had been attacked. Whilst examining the eye, I was struck with the mercurial fœtor of her breath, and inquired into its cause. She told me her mouth had become very sore, and the teeth were so tender she could scarcely eat; and I found, on examining the gums, she was salivated. This she insisted was impossible, as she had taken nothing but Swaim's Panacea: I assured her nothing was more likely, as I was satisfied the active principle was corrosive sublimate. Mr. Swaim called the same day to see his patient; and, when reproached for the salivation that had been induced, he declared it was produced by his medicine stirring up the old mercury in her system. This lady had not, however, for more than eight years, taken a single grain of mercury in any shape. Mr. Swaim took away the bottle of Panacea, though not half consumed, and replaced it with another.

Soon after my election as one of the physicians of the Alms-House, I gave to the apothecary of that establishment, Mr. Marks, the formula for preparing Cuisinier's syrup. It was immediately employed in some cases of cutaneous ulceration of long standing, and with great success. Since that period, it has been employed in that Institution; during which, not a bottle of Swaim's Panacea has been administered to the patients. In the Alms-House, I have frequently had patients under my charge, who had been treated ineffectually by Mr. Swaim, with his Panacea; and I have had several in private practice, in which it had proved wholly inefficacious. Dr. J. Rhea Barton has exhibited to me two patients, one of true scrofula; both of whom were promised, unhesitatingly, a cure from the Panacea, but whose disease became infinitely worse under the treatment, and were finally abandoned. One of them has since been entirely cured under the care of Dr. Barton.

(Signed) SAMUEL JACKSON, M. D.

Extract of a Letter from Dr. Emlen.

I have met with a great number in this city, and have heard of many others, who have taken the panaceas, catholicons, &c. but principally that called Swaim's Panacea; and of all the patients I have met with, who have used the last named medicine, I have only heard *one* out of the whole number say that he was benefited by its use.

The first patient who came under my notice, who used Swaim's Panacea, was H. C. an engraver, in Fifth street, near Race. I think it was in 1821. I visited him twice only, with a scrofulous tumour, when I received a note from him, stating he had called in other medical attendance by the solicitation of his brother, &c. A few weeks after, the said H. C. called on me, asked my pardon, and expressed great regret that he had yielded to others in employing a Dr. Swaim, and that he had taken seven bottles of his medicine, at five dollars a bottle, without the least benefit; when the said Dr. Swaim finding no improvement, had gone to the apothecary who had put up the medicine he had been using by my direction, and directed some of the very same, which the patient knew at once by its taste and appearance, and being disgusted with the bottles of molasses, and this stratagem of his doctor, he soon discharged him. This patient, after making what I considered a sufficient apology, I took under care again, and in a few weeks he was discharged well.

Another case was a slave of E. H. from Charleston, with a number of scrofulous tumours, and a troublesome cough, which I had no doubt was the result of incipient phthisis. She was placed under my care, but her mistress was informed by me that medical treatment was not likely to be of much service. She wished to try the Panacea of Swaim, of which she had heard and read so much in the cure of scrofula. I stated to her that I had seen it used in many cases of genuine scrofula, and not in any one instance with any benefit whatever. E. H. however, upon returning to Charleston, placed her slave upon the use of the Panacea, in the purchase of which she spent seventy dollars; and when she returned again to Philadelphia the ensuing summer, placed the slave under the immediate care of William Swaim, who continued his visits, and his bottles of molasses and corrosive sublimate, till the patient was brought under a profuse ptyalism, and the doctor ran away with his bottle, that she might not be tempted to take more. The mistress informed me after this she sent again and again for the run away doctor, who sent word as often, he would be there *directly*, but never came near his patient again, who sunk rapidly, and died immediately after arriving at Charleston in the autumn.

The next case I recollect was a boy in the Orphan Asylum, in Cherry street, with scrofulous tumours all over the body, who had been several years afflicted. Drs. Otto, Hewson, and James Rush, who were associated with me, had all had the boy under care; a bottle of Swaim's Panacea was bought, and the boy placed under its use. I stated I believed it would not be of service, and that I thought it a wasteful expenditure of the funds of the institute. He died before he finished one bottle.

The next was a poor woman of the name of C. T. who got her living by selling pennyworths of yeast, gingerbread, &c. in Cherry, just above Seventh street. This poor woman took the medicine for two years, for some ulceration of the throat, &c. and expended, as she declared to me, more than sixty dollars in the purchase of Swaim's Panacea, from the owner himself. She afterwards moved to Fayette street, where she died with the disease within a few months past. She informed me, before she died, that she told the said William Swaim again and again, when she visited him, during the two years, that it done her no good, but that he always insisted that the next and the next would cure it, till he exhausted her of all her funds, and she could go no longer. After she ceased taking it, and had stated to her friends she was worse, and that it did her no good, she declared to me that the said Swaim, who had stripped her of all her money, called upon her in Fayette street, and before he had even entered the house, commenced railing at her "*for telling it about that his medicine had done her no good.*"

The next case which came under my notice, was E. D. from Charleston, who is now under Swaim's care, and came on for the express purpose, notwithstanding she informed me that she received no advantage whatever from taking twelve bottles of his panacea, and she declared she "only wished she had thrown the money she paid for it in the street, that some one might have been benefited by it." This lady was at my house the last week, and stated she had suffered excruciating pain all the summer from the caustic applications of Swaim to her chin and lip—her under lip is entirely destroyed by his applications, the whole length, and she presents a horrible aspect. When asked if the disease was getting better, she replied "*she hoped so.*" This lady, as well as another from Maryland, both have been patients of Dr. Physick, as well as Mrs. E. of whom so much has been said, and it was at the recommendation of the last-named that they were induced to come on to this city, and place themselves "under the care of the celebrated Dr. Swaim, who cured where Dr. Physick could not." It is reported about the city that both these ladies are nearly well.

I could relate other cases, but they would occupy too much time of the committee. I have seen a number of poor sailors who applied for admission in the hospital after expending all the funds they had, in this and other panaceas; and a poor carter, who stated to me he had spent fifty dollars in Swaim's Panacea, for rheumatism, which done him no good whatever, and that his son had spent twenty-eight dollars in the same medicine.

(Signed) SAMUEL EMLEN, Jr.

September 26th, 1827.

Many other documents have been received, but we have not room at present for their insertion. An analysis of them will be found in the report of the committee.

These documents most conclusively prove:—

1st. That the Panacea of Mr. Swaim, *is composed of articles long in use and well known to the profession.*

2d. That at least one of these articles is of a most active nature, and its administration highly dangerous, and even productive of fatal effects, unless given with great caution, and its operation closely watched.

3d. That the Panacea of Mr. Swaim has been useful in a very limited number of diseases alone.

4th. That even in these affections it often fails to effect a cure.

5th. That cases which it has failed to relieve, have been cured by the articles of which the "Panacea" is composed, judiciously combined, and aided by other appropriate medical treatment.

6th. That the certificates granted to Mr. Swaim by the medical men of this city, were given when their experience with the remedy was very limited; and that a more extensive trial with it has *not* confirmed the favourable impressions they at first entertained of its utility.

7th. That many of the cases supposed to have been perfectly cured by the "Panacea," were only temporarily relieved, and in others no benefit whatever was received from the use of that nostrum.

An Introductory Lecture to the Institutes of Medicine. By Samuel Jackson, M. D. Assistant Lecturer to the Theory and Practice of Medicine and Clinical Medicine in the University of Pennsylvania.—This eloquent and interesting lecture has been published by the class. It presents a sketch of the subjects comprehended in the institutes of medicine; an attempt to prove that medicine, as a science, rests upon principles; that its improvement depends on their cultivation and accurate development; and that by no other mode can the treatment of disease be rendered safe and methodical.

Martinet's *Manual of Pathology.*—We are happy to announce that Messrs. Carey, Lea and Carey, have re-published this valuable little work. We have already expressed our sense of its merits, and will now add as further evidence of its value, that it has gone through two editions in France, and a like number in England, in less than one year.

System of Pharmacology.—Jonathan A. Allen, M. D. Professor of Materia Medica and Pharmacy, proposes to publish "A System of Pharmacology; designed for the use of the Vermont Academy; and also as a Manual for the Practitioner of Medicine.

Journal des Sciences Naturelles de l'Amérique du Nord. Publié par Xavier Tessier, *ci-devant Editeur du Journal de Medecine de Québec.* Dr. Tessier, former editor of the Quebec Medical Journal, proposes to publish at New York, a periodical journal in the French language under the above title: a volume of three hundred pages is to appear quarterly—subscription six dollars per annum.

New Edition of Professor Chapman's Therapeutics.—Messrs. Carey, Lea and Carey, have recently published the fifth edition of the Elements of Therapeutics and Materia Medica. To which are prefixed two discourses on the History and Improvement of the Materia Medica, originally delivered as introductory lectures. By N. Chapman, M. D. Professor of the Institutes and Practice of Physic and Clinical Practice in the University of Pennsylvania. In two vols.

Lecture Introductory to the Course of Anatomy and Physiology, in Rutgers Medical College, delivered on Friday, Nov. 2, 1827. By John D. Godman, M. D. Professor of Anatomy and Physiology. Published by the class.—We had marked several extracts from this eloquent lecture for insertion, but we have space only for the following.

After observing that general anatomy is to anatomical science what chemistry is to the other branches of natural science, Dr. G. observes, "The researches of Bichat, led him to think that he could establish twenty-one elementary or generating textures, constituting all the peculiar organs. The labours of his successors, as we shall hereafter state more fully, have led to the adoption of other classifications, by which the number of elementary textures has been advantageously lessened.—These textures wherever found, are respectively governed by the same general laws, are possessed of the same susceptibilities, and in diseased conditions exhibit similar phenomena. Hence, we may even in the very inception of our subject obtain a glimpse of the pervading influence which such knowledge of the general laws governing the intimate organization of our bodies must exercise upon medical science. One of the greatest and most beneficial consequences of a proper acquaintance with General Anatomy, is the death-blow given to the notions so flattering to our ignorance, of specific and incurable diseases; and not less important, the termination of the science of bestowing upon symptoms, names expressive of some real entity, which is called the disease. When once we have learned the General Anatomy of the nervous systems of animal and organic life, the true character and actions of the vascular system, in its various modifications, we no longer waste our time in allowing morbid conditions to become established, that we may bestow names upon them, and apply an ordained or routine course of treatment; but, we trace the action of the offending cause to the part which originally suffered, and guided by the established laws of the healthy texture, we take the surest and speediest means of restoring that equilibrium which is essential to the performance of the vital functions. Under the influence of a proper knowledge of the textures composing our organs and their modes of vitality, we are secured from the folly of hoping for *remedies* or specific cures, for supposed specific diseases. We regard remedial agents solely as they are capable of operating changes in the general and special actions of the system —as they influence the great functions of digestion, circulation, and nutrition. This advantage is of the highest importance to our profession, as it leads us to occupy ourselves, not with vain attempts to discover remedies for given diseases, but to determine in what degree medicinal agents effect changes in specific textures, and in how far they are capable of impressing and controlling the functions of organic life.

"Perhaps the improvement of our profession, and the good of our race has been more injured by the prejudices entertained on the subject of diseases and remedies, than from any other cause. Not only did the search after remedies lead men from the true path, but such researches tended to the eventual destruction of inquiry by the total darkness into which they led, to say nothing of the extravagancies of doctrine which were from time to time sent forth.

"Until the period when the science of General Anatomy may be said to have commenced its existence our profession may be truly declared to have been destitute of fixed, rational principles, and fairly entitled to the appellation of a conjectural art. Without in the least wishing to detract from the merits of the great men who preceded this period, it is undeniably true, that their works are of comparatively slight value, for want of the principles which have since been deduced from the structure of textures and their dependencies of function. I know that some may feel tempted to exclaim against the idea that we should rashly judge those we have been taught to revere in Medicine: We may be told of the profound and accurate observations of the divine old man of Cos, the Father of Medicine; of Sydenham, the Hippocrates of England; of Boerhaave, no less an honour to human nature than the glory of the medical profession; of Hoffman; of Cullen; and our worthily celebrated countryman Rush; yet the truth need not be concealed, that it were better for the interests of mankind and the future character of the medical profession that all of these and a host of lesser medical writers should be blotted out forever than that the works of Bichat should have been withheld.* With no better guides than the old books we might go darkling along forever, gathering as we advancced a few unequivocal truths at the price of infinite losses of life and the endurance of innumerable sufferings; but with a science resting upon facts, and not merely of facts, but of such as establish the most universally operative principles, and explain the most complicated and apparently mysterious operations in nature, the condition to which Medicine may be perfected can scarcely be imagined unless by comparing what has taken place since the impulse of this science has been felt by our profession, with what previously existed. If proofs be demanded that these opinions are not mere enthusiasm—look at the bills of mortality since true views of structure and function have exploded the old doctrines of idiopathic fever; since dropsies have ceased to be regarded as original diseases; since the venereal has laid aside its supposed specific nature and ceased to require its specific remedy—since the name of consumption has ceased to be applied to all the affections of the lungs, and to most of those of other organs of the chest! Look at the modes of practice generally employed by such as are within reach of the improvements of the times although they are too frequently ignorant of the sources whence all their advantages flow, and every confirmation that can be desired for our positions will be found. It is from the establishment of true principles alone, that our profession is to hope for a continued and successively enlarging career of improvement, for however matters of fact may be valuable in themselves, it is only as they enable us to form, or tend to support some general or universal law or truth, that they deserve our especial regard."

NECROLOGY.

It is with extreme regret that we have to announce the death of our distinguished collaborator, the Hon. George Holcombe, M. D. a member of the House of Representatives of the United States, which took place at his late residence in Allentown, Monmouth County, New Jersey, on the 14th ultimo. Dr. Holcombe was eminent as a physician, and when released from the discharge of those honourable public duties which his fellow-citizens conferred upon him as evidence of the regard they entertained for his talents and integrity, enjoyed an extensive practice. His mind, though well stored with the learning and observation of his predecessors and contemporaries, relied less upon these adventitious supplies, than upon the application of its own fertile resources. Aided by these last qualifications, united to powers of quick perception and correct judgment, his practice was at once original, decisive, energetic, and successful. His useful qualifications were well set off by the talents he displayed for the ornamental branches of education, which in conjunction with great amiability of character and urbanity of manners, rendered him an agreeable associate, and an ornament to society.

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* In saying this, we particularly refer to the direction and impulse given to the Medical mind, by the researches of this great man, whose writings may justly be considered to have the same influence upon Medicine as the writings of Bacon had upon general science. Though not containing in themselves the whole of what is necessary to science, yet possessing the germs of vast improvements and indicating the true course by which future investigators may advance until the desired perfection be attained.

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ERRATA.

Page 37, line 13 from the top, for "*coast*," read *coats*.
119, " 4 " bottom, for "*Table II.*" read *Table I.*
138, " 12 " bottom, for "*males*," read *females*, and for "*females*," read *males*.
249, " 28 " bottom, insert *not*, before "*to*."
300, " 13 " top, for "*those organs*," read *that organ*.
413, " 3 " bottom, for "*physiological*," read *philosophical*.
415, " 16 " top, for "*peltinee*," read *pettinee*.

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AMERICAN JOURNAL

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Thomas Fearn, M. D. *of Alabama.*

John W. Francis, M. D. *Professor of Obstetrics and Forensic Medicine in Rutgers Medical College, New York.*

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Ansel W. Ives, M. D. *of New York.*

Samuel Jackson, M. D. *one of the Physicians of the Philadelphia Alms-House Infirmary.*

Samuel Jackson, M. D. *of Northumberland, Pennsylvania.*

Frederick G. King, M. D. *of New York.*

William J. Macneven, M. D. *Professor of Therapeutics and Materia Medica in Rutgers Medical College, New York.*

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THE

AMERICAN JOURNAL

OF THE

MEDICAL SCIENCES.

VOL. II.

PHILADELPHIA:
CAREY, LEA AND CAREY—CHESNUT STREET.

1828.

TO READERS AND CORRESPONDENTS.

We have received communications from Drs. **Spence**, of Dumfries, Va. **Bartlett**, of Lowell, Mass. and **Kain**, of Shelbyville, Tenn.

We have just learned that the operation for tying the subclavian artery by **Bransby Cooper**, Esq. recorded as successful in the London Medical and Physical Journal—and noticed in this No. page 215, was unsuccessful.

The success of the operation seemed almost certain, but suppuration occurred in the sac, and subsequently hæmorrhage, which terminated the patient's life on the 8th of February last.

We have received the following publications:—

Traité Général d'Anatomie comparée. Par J. F. **Meckel**. Traduit de l'Allemand et Augmenté de Notes. Par MM. **Riester**, et **Alph. Sansom**, Docteur en Chirurgie de la Faculté de Paris: Précédé d'une Lettre de l'Auteur. Tom. Premier. Paris, 1828. Villeret et Cie, (from the translators.)

Transactions of the Medical Society of the State of New York, for the year 1828. With the annual address, by T. R. Beck, M. D. President of the Society, (from the society.)

Medico-chirurgical Transactions, published by the Medical and Chirurgical Society of London. London, 1827.

Journal des Progrès des Sciences, et Institutiones Médicales, en Europe, en Amerique, &c. Vol. VI. and VII. 1827 and 1828, (in exchange.)

Annales de la Medicine Physiologique. Par F. J. V. **Broussais**, D. M. for October, November, and December, 1827, (in exchange.)

Bulletin des Sciences Medicales, for October, November, and December, (in exchange.)

The Edinburgh Medical and Surgical Journal, for January, 1828, (in exchange.)

The London Medical and Physical Journal, for January and February, (in exchange.)

The Medico-Chirurgical Review, for January, 1828, (in exchange.)

The London Medical Repository and Review, for January and February, 1828, (in exchange.)

The London Medical Gazettee, No. 1, 2, 3, 4, Vol. I, (in exchange.)

The North American Medical and Surgical Journal, for April, 1828, (in exchange.)

The Boston Medical and Surgical Journal, Vol. I. No. 1, 2, 3, 4, 5, 7, 8, 9, (in exchange.)

The Western Medical and Physical Journal, for January, 1828, (in exchange.)

La Clinique des Hôpitaux et de la Ville, (in exchange.)

Introductory lecture delivered at the commencement of the fourth session of the Medical College of South Carolina, November, 1827. By **Samuel Henry Dickson**, M. D. Professor of the Institutes and Practice of Medicine. Charleston, 1828, (from the author.)

The works of **William Cullen**, M. D. Professor of the Practice of Physic in the University of Edinburgh: containing his Physiology, Nosology, and first lines of the Practice of Physic: with numerous extracts from his manuscript papers, and from his treatise of the Materia Medica. Edited by **John Thompson**, M. D. F. R. S. L. and E. Lecturer on the Practice of Physic, &c. &c. Edinburgh, 1827, 2 vols. 8vo. pp. 1336.

Nouvelles Recherches sur l'Origine, la Nature, et le Traitment de la Môle vésiculaire ou grossesse Hydatique. Par Madame **Veuve Boivin**, Maitresse sage femme, Surveillante en chef de la Maison Royale de Santé de Paris, &c. &c. Paris, 1827, pp. 80, avec figure.

Lettre a l'Academie des Sciences. Examen Critique de l'Ouvrage de M. le Docteur Civiale, Intitule de la Lithoritie, &c. Par M. L. **Baron Heurteloup**, D. M. P. Paris, 1827, pp. 104, with a plate.

Etudes Cliniques sur les Emissions Sanguines Artificielles, Ouvrage qui a Remporté le Prix Proposé par la Société Académique de Medicine de Marseille pour l'Année, 1826. Par A. P. **Isidore Poloniere**, D. M. Medicin de l'Hotel Dieu de Lyon, &c. &c. Paris, 1827.

Examen des Principes de l'Administration en Matière Sanitaire, ou Reponse au Discours Prononcé a la Chambre des Députés, le 31, Mai, 1826. Par M. de **Boisbertrand**, Directeur de l'Administration Générale des Establissments d'Utilité Publique. Par N. **Chervin**, D. M. P. &c. &c. Paris, 1827.

Pathological and Practical Researches on Diseases of the Brain and Spinal Cord. By **John Abercrombie**, M. D. &c. Edinburgh, 1828.

Memoires of West Indian Fever, constituting brief notices regarding the treatment, origin, and nature of the disease commonly called Yellow Fever. By **John Wilson**, M. D. R. M. London, 1827.

An Essay on the Structure, Functions, and Diseases of the Nervous System. By **John R. W. Dunbar**, A. M. of Virginia. Recording Secretary of the Philadelphia Medical Society. Philadelphia, 1828, (from the author.)

Memoires sur le Traitément des Anus Artificiels, des Plaies, des Intestins, et des Plaies pénétraites de poitrine. Par J. F. **Reybard de Coisiat**, Médecin a Annoy, D. M. P. &c. Paris, 1827.

Essai sur les Maladies de l'Oreille Interne. Par J. A. **Sassy**, D. M. &c. Paris, 1827.

A Practical Essay on Stricture of the Rectum; Illustrated by Cases. By **Frederick Salmon**, Surgeon to the General Dispensary, &c. London, 1828.

Some of our contributors having expressed a desire to be informed when their communications are noticed in other Journals, and as we believe it will be agreeable to all our correspondents, we shall hereafter regularly furnish them with this information; at present we can only refer them to such notices as are contained in the few Journals now on our table.

Dr. **Mott** will find his case of calculous degeneration of the scrotum, copied into the London Medical and Physical Journal, and into the London Medical Repository and Review for December, 1827—his case of ligature of the common iliac noticed in the Journal des Progrès, Vol. VI. the London Medical and Physical Journal for October, 1827, and the Boston Medical and Surgical Journal, Vol. I. No. IV.—his operation for abscess of the chest, in the Journal des Progrès, Vol. VI. and London Medical and Physical Journal for October, 1827.

Dr. **Fearn**'s paper on tendons is noticed in the London Medical and Physical Journal for December, 1827, Medico-Chirurgical Review for October, 1827, and Boston Medical and Surgical Journal, Vol. I. No. V.

Dr. **Hayne**'s communication on the use of cold water as a cure for salivation is re-published in the London Medical and Physical Journal for January, 1828.

Professor **Hare**'s method of preparing denarcotised laudanum is copied into the London Medical Repository and Review, and Medico-Chirurgical Review for January, 1828.

Dr. **Mauran**'s case of malformation of the heart is re-published in the Journal des Progrès, Vol. VI.

Dr. **Rush**'s case of pulsation of the veins is re-published in the Journal des Progrès, Vol. VI. London Medical and Physical Journal for October, 1827, and London Medical Repository and Review for September, 1827.

Dr. **Horner**'s inquiries respecting the gastro-intestinal mucous membrane are analysed in the London Medical and Physical Journal for February, 1828—in the Boston Medical and Surgical Journal, Vol. I. No. III. and in the North American Medical and Surgical Journal for January, 1828.

Mr. **Carpenter**'s paper on piperine is re-published in the Western Medical and Physical Journal, for January, 1828.

Dr. **Rogers**'s operation for the re-establishment of the urethra is noticed in the London Medical and Physical Journal, for October, 1827.

Professor **Chapman**'s paper on hydrocephalus is re-published in the London Medical and Physical Journal for July last, and Professor **Dewees**'s on bloody infiltrations into the labia pudendi, is copied into the same Journal for November.

All the papers contained in No. 1, are analysed in the Boston Medical and Surgical Journal, Vol. I, No. 3 and 4.

Authors of new medical books, desirous of having them reviewed or noticed in this Journal at the earliest opportunity, are invited to transmit us a copy as soon after publication as convenient, when they will receive prompt attention. Under ordinary circumstances, very considerable delay is caused by the circuitous routes through which they reach us.

Papers intended for publication, should be sent as early after the appearance of the Journal as possible, in order to be in time for the ensuing number. Such communications should be addressed to "**Carey, Lea** and **Carey**, Philadelphia, for the editors of the American Journal of the Medical Sciences." All letters on the *business* of the Journal to be addressed exclusively to the publishers.

After this sheet was ordered to press, we received a letter from one of our collaborators, Professor **Francis**, complaining that Dr. **Ives** has noticed, page 368 of our last number, in an uncandid manner, a case published by the former in the New York Medical and Physical Journal, in which large doses of tincture of cantharides were taken.

Professor **Francis** says, that in his general observations on the use of the tinct. canth. he stated, that he generally commenced with doses of twenty or twenty-five drops, three times a day; that after a few days, the dose is to be increased to thirty or forty drops, and repeated as before, and that the extent to which the remedy might be administered seemed incredible, independent of experience; that in the case adverted to by Dr. **Ives**, the sufferer's long-continued bodily infirmity, his disregard of advice and caution, and his determination on self-destruction were especially noted in the original account: and moreover, the fact that the patient took, of his own accord, six ounces of the tinct. lyttæ, with suicidal intent, was not given as Professor **Francis**'s individual practice.

Professor **Francis** alludes in his letter to the well-known fact, that the human constitution may be accustomed by degrees to much larger doses of medicine than are ordinarily administered, and that the same quantity of a potent article which might be with safety and even judiciously given at one stage of a disease, would at another be attended with fatal effects; and he cites the instance of the noted corrosive sublimate eater, and the case related by Wilson, of a man who swallowed four ounces of laudanum without experiencing from it even a tendency to sleep; and also the observation of Roberton—that he has met with many who were astonished at the quantity of tinct. lyttæ he gave, without mixing it with any emollient substance, to prevent its supposed violent action on the stomach; but that he never found those deleterious consequences result from its exhibition.

It cannot for a moment be supposed, that Dr. **Ives** intended to convey an erroneous impression of Professor **Francis**'s practice. The only question is, whether or not it is safe to give cantharides in large doses—the papers of Drs. **Francis** and **Ives** are both before the public—the truth of the cases they have related cannot be doubted—and the profession can decide the question.

ERRATA.

Page 14, line 7 from the bottom, for "*Levret*," read *Levert*.
121, 19 from the top, after "*capacity*," insert *is less*.
126, 11 from the top, for "*sanguinary*," read *sanguineous*.
133, 23 from the top, for "*were*," read *are*.
145, 15 from the top, for "*ù*" read [illegible].*a*
177, 16 from the bottom for "*Harlam*," read *Haslam*.

In our last Number—

Page 358, line 1, for "*medicine*," read *medium*.
do. 4 from the top, for "*art*," read *act*.
359, 26 from the top, for "*motorial*," read *material*.

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2. Médecine Légale relative aux alienes et aux Sourds-muets, ou les lois appliquées aux désordres de l'intelligence. Par J. C. Hoffbauer, Professeur à l'Université de Halle, traduit de l'Allemand, par A. M. Chambeyron, avec des notes par MM. Esquirol et Itard. Paris, 1827, pp. 388, 8vo. 177
3. A Manual of Surgical Anatomy, containing a minute description of the parts concerned in Operative Surgery, with the Anatomical Effects of Accidents and Instructions for the Performance of Operations. By H. M. Edwards, D. M. P. Translated with notes, by William Coulson, Demonstrator of Anatomy, &c. London, duodecimo, pp. 427. - - - 179
4. Traité Théorique et Pratique des Maladies de la Peau, fondé sur de Nouvelles recherches d'Anatomie et de Physiologie Pathologiques. Par P. Rayer, Médecin titulaire des Dispensaires de la Société Philanthropique, Médecin du Bureau Central des Hôpitaux, Membre-Adjoint de l'Académie Royale de Médecine, Membre de la Société Médicale d'émulation de Paris, de la Société Médicale de Londres, des Sociétés de Médecine de Caen, de Lyon, etc. Paris, 2 vols. oct. pp. 1401, with an Atlas of coloured plates. - - - - - - - - - - - 182
5. A Memoir on the Diagnostic Signs afforded by the Use of the Stethoscope in Fractures, and in some other Surgical Diseases. Translated from the French of Professor Lisfranc, with Notes and Additions by J. R. Alcock. London, 1827, pp. 46. 18mo. [With a plate.] - - - 186
6. Coup-d'oeil sur les Maladies les plus importantes qui règnent dans une des iles les plus célèbres de la Grèce, ou topographie médicale de l'ile de Leucade, ou Sainte-Maure. Par Alph. Ferrara, M. D. &c. Paris, 1827, 8vo. pp. 68. - - - - - - - - - - - 192

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THE occurrence of poisoned wounds being comparatively unfrequent, the opportunities presented of witnessing their effects, are very limited. Under these circumstances, it is not surprising that the medical world should be still divided in their opinions respecting the modus operandi, and the treatment of external poisons.

All the other departments of medical and surgical science have been cultivated with a zeal proportioned to their importance; and the accumulated experience of centuries, has rendered the enlightened practice of medicine and surgery, in many respects, certain.

That branch, however, to which I have alluded, has, from unavoidable circumstances, not attained correspondent elevation. Our practice in the treatment of such injuries, must be considered tentative and experimental—too frequently, indeed, it is altogether empirical. The numerous physiological investigations, however, which at present are conducted with so much ardour, warrant the belief, that this neglected subject will be more fully elucidated, and that a more determinate and scientific practice will happily result from such inquiries.

Among the authors who have recently written on the external application of poisons, Dr. Barry, an English physician formerly resident at Paris, has presented some very interesting views on the treatment of such injuries, which he has illustrated by a series of well-conducted and instructive experiments. Although the physiological inferences which he has derived from these experiments are not entirely satisfactory, yet I presume the profession of medicine will derive from his inquiries some suggestions which will be found practically useful.

This gentleman, in studying the phenomena of the venous circulation, "was astonished that the pressure of the atmosphere was either entirely left out in the enumeration of its causes, or considered merely as a secondary agent." In pursuing his investigations, he was led to observe, that by the act of inspiration, a vacuum is formed within the chest, when it tends to dilate its capacity; and that all liquids in communication with the interior of the thorax must be attracted thither, being forced towards it by atmospheric pressure. By this physical action, he explains the fact of the swelling of the jugular veins during expiration; their collapse at the moment of inspiration; the cessation of certain hæmorrhagies, by means of forced inspiration; the absorption of air by the veins, and the accidents which have resulted from it, when any of the vessels near the heart have been opened or divided.*

With the view of proving the agency of atmospheric pressure in the circulation of the veins, he instituted a series of experiments: these were repeated by Dr. Barry in the presence of the Baron CUVIER and M. DUMERIL, a committee appointed by the Institute of France, to investigate his views. The report of this committee was decidedly favourable to the correctness of Barry's positions, which they state were satisfactorily elucidated and demonstrated by his experiments, "executed with the greatest address, and with such satisfactory precautions as would obviate all objections which might be opposed to them."

Dr. Barry's view of absorption is also peculiar. He does not consider it as a vital function, but as a physical effect dependant on the same cause as the venous circulation: i. e. atmospheric pressure. It is thus defined by him: "absorption, as exercised by living animals, in its physical acceptation, and with reference to matter external to those animals, is the transport of that matter from their surface towards their centre." This is effected by "atmospheric pressure," and two causes or circumstances are considered as indispensable to its accomplishment.

First. "A free communication between the matter to be absorbed, and the thoracic cavities."

Second. "Atmospheric pressure, modified by the expansion of these cavities around one end of the communicating tubes, (the sanguiferous or lymphatic veins,) while the same pressure is free and undisturbed around the other."

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* See note at the end of this essay.

Assuming these data, and taking for granted that sanguiferous or lymphatic veins, or both, are the organs of absorption, and that death from poisoned wounds is caused by the absorption of the poison, Dr. Barry arrived at the conclusion, that the deleterious effects could be prevented by arresting this function; which could be effected, provided "the points of contact of the absorbing surface and the substance to be absorbed were placed under the influence of a vacuum." In applying this theory to practice, Dr. Barry removed the atmospheric pressure from the poisoned surface by means of cupping-glasses. He instituted a series of experiments with poisons, the fatal activity of which had been well ascertained; such as concentrated hydrocyanic acid, strychnine, upas tiéute, and white oxide of arsenic.

Considering the results of these experiments as very interesting in a physiological, as well as in a practical point of view, I repeated a similar series during the month of August, 1827. The results which I obtained were very much in accordance with those of the original experiments, and most of the important facts were fully verified. The articles employed, were the strychnine, hydrocyanic acid, and the arsenous acid. I did not consider it necessary to employ many different poisons, as my object was, not so much to ascertain their specific effects as to establish general principles respecting the influence of a vacuum on poisoned surfaces.

As a preliminary experiment, I ascertained the effects of the different poisons. I was satisfied by my trials, that a grain of strychnine, deposited in the cellular tissue of the thigh of an adult rabbit, would produce death, in from eighteen to twenty-five minutes. That six drops of the usual medicinal hydrocyanic acid, of the London Pharmacopœia, would, under similar circumstances, destroy life in eight or ten minutes; and that ten grains of the white oxide of arsenic, required seven hours to effect the same purpose.

The poisons used by Dr. Barry must have been more powerful than those employed by me. He found the fatal effect of strychnine on rabbits, to take place in five to seven minutes—of hydrocyanic acid in two minutes; and ten grains of arsenic killed a dog in six hours. The latter poison I found much slower in its operation; upwards of thirty-six hours being required to kill a dog, by the insertion of thirty grains beneath the integuments of the thigh. The articles I used were from the most respectable sources. The arsenic was procured in crystalline form, and the strychnine was from MM. Robiquet and Pelletier of Paris. The animals employed in the pursuit of these investigations were principally rabbits and dogs, and two animals were subjected to each experiment. The poison was applied to each under corresponding circumstances, as regards the depth of the wound, the place of insertion, and the quantity of the substance employed. The "piston cupping-glass" was applied to one, whilst the other was abandoned to his fate. The animal on which the cup was used did not manifest any symptoms of poisoning, although the poisonous matter remained in contact with the cellular or muscular surface frequently for hours; in one instance, for upwards of forty hours. The experiments were performed at the Philadelphia Anatomical Rooms, and I was indebted to the politeness of Dr. J. Webster, for that privilege.

The conclusions derived from the experiments are as follow, viz:—

First. The usual effects of poisoned wounds cannot take place during the absence of the atmospheric pressure procured by the application of cupping-glasses.

Second. Such application does not arrest the deleterious action of the poison by withdrawing it from the exposed surface; on the contrary, the fatal effects are wholly prevented, though not a particle of the substance employed has been abstracted. In proof of this, if a poison, in powder, (strychnine or arsenic for instance,) be conveyed by a tube through a narrow wound, in an oblique direction under the integuments, to some distance from the opening by which it is introduced, and there deposited—and under these circumstances the glass be applied over this spot, where the skin is sound and unbroken, the wound being without the bounds of the glass, none of the poisonous substance will be removed, and yet no indication of its action will be presented during the time of the application of the glass.

Third. The constitutional symptoms, such as tetanic convulsions, etc. are arrested by the establishment of a vacuum on the poisoned surface; then by removing the poison by an incision through the integuments, the life of the animal is preserved.

Fourth. When the cupping-glass is applied over the opening made in the integuments for the purpose of introducing the tube containing the poison, and this is deposited under the skin beyond the circumference of the glass, none of the effects are manifested during the continuance of the vacuum, but as soon as the cup is removed, the action of the deleterious article commences.

Fifth. If during the application of the cupping-glass, placed as just stated, an incision be made between its edge and the place at which the poison has been lodged, death will ensue as speedily as though the atmospheric pressure had not been removed.

Sixth. If after the application of a glass for a given time, to the sound skin over the spot where the poison has been deposited, the glass be removed, death will then ensue as soon as if no such application had been made.

This last position is entirely at variance with the observations of Dr. Barry. He expressly says, that "after the glass had been taken off, the animal continued for one or two hours to carry imbedded in his cellular tissue a dose which would infallibly have destroyed him in a few minutes, had the cupping-glasses not been previously applied.

I have repeatedly observed, however, that if the animal was abandoned to his fate after the glass had been removed, after an application of it for an hour or more, that death took place as soon afterwards as it ordinarily did when no vacuum had been formed. Experiment fifth is in confirmation of this fact.

Experiment 1*st.*—I introduced into the left thigh of a remarkably large and strong adult rabbit, between the skin and cellular tissue, one grain of strychnine. The wound was closed by suture and adhesive plaster. The animal soon showed symptoms of great uneasiness, attended by difficult respiration. In thirteen minutes after the insertion of the poison, slight convulsive movements were manifested, which at seventeen minutes increased greatly. At twenty minutes, violent convulsions of a decided tetanic character ensued, which threw the whole frame of the animal into violent agitation. At twenty-three minutes after the introduction of the poison, opisthotonos came on: every muscle was rigid, and death quickly ensued.

Experiment 2*d.*—I inserted into the thigh of a rabbit, smaller, and less vigorous than the subject of the first experiment, one grain of strychnine under circumstances precisely similar. The wound was closed by suture, and covered by a strip of adhesive plaster. Two minutes afterward, the cupping-glass was applied, and the atmospheric pressure removed; this was continued an hour and fifteen minutes, and no symptom of the action of the poison was exhibited. The poison was now cut out, and the wound being carefully washed, it was closed by suture and adhesive plaster. The animal being placed at liberty, ate, appeared lively, and regardless of the pain to which he had been exposed; in a few days he recovered from the injury.

Experiment 3*d.*—One grain of strychnine was introduced through the barrel of a quill, some distance beneath the skin, and into the cellular tissue of the thigh of a rabbit. The orifice was closed by suture and adhesive plaster, and the animal abandoned to his fate. He became extremely uneasy and restless; walking with agitation about the room, and with irregular and difficult respiration. In twelve minutes, spasm came on, which was soon succeeded by opisthotonos, and life was destroyed in four minutes afterwards: sixteen after the insertion of the poison.

Experiment 4th.—One grain of strychnine was introduced through the barrel of a quill to the distance of an inch between the muscles and skin of an adult rabbit.

The small orifice through which the tube was introduced, was covered with a strip of adhesive plaster, and the cupping-glass immediately applied to the sound skin, over the spot at which the poison was deposited, leaving the wound without the bounds of the glass. No symptom appeared during the time of the application of the cup, which was fixed on the spot for more than an hour. Upon the removal of the glass, the poison was cut out, the part carefully washed, the wound closed with the interrupted suture, and the rabbit lived and did well.

Experiment 5th.—One grain of strychnine was introduced into the thigh of a full grown rabbit, as in the preceding experiment, and the cupping-glass applied on the sound skin over the poison. No tetanic symptoms having been manifested at the expiration of one hour and eleven minutes, I removed the cup; and wishing to ascertain at what period after the removal of the cupping-glass, the poison would prove fatal, the rabbit was released from the board to which he had been bound, and placed at liberty on the floor. In sixteen minutes afterwards he was seized with violent tetanic symptoms, opisthotonos supervened, and he died in two minutes afterwards.

From this experiment it is evident that although the peculiar effects of the poison are prevented during the application of the cupping-glass, yet the symptoms of poisoning recur immediately after its removal, and death results, as soon as if no such application had been used.

This fact being of great practical importance, and being directly the reverse of a position laid down by Dr. Barry, I should have stated it with great hesitation, had I not verified it by repeated experiments, in the performance of which I was kindly assisted by my friends, Dr. COMSTOCK, and Messrs. GEORGE SPACKMAN and H. LEVRET, students of medicine.

I am therefore decidedly of the opinion, that the cupping-glasses do not so affect the texture of the parts to which they are applied, as to induce any functional alteration in the poisoned surface, which will in any degree arrest the effects of the poison after their removal.

Experiment 6th.—Two very small and feeble rabbits were the subjects of this experiment. Into the thigh of the first, one grain of strychnine was deposited beneath the cutaneous tissue. He was abandoned to his fate.

Tetanic symptoms came on in nine minutes—in eleven, death.

Into the left thigh of the other rabbit, one grain of strychnine was introduced through the barrel of a quill to the distance of an inch and a quarter, between the skin and muscles. Almost the whole of it was deposited at the end of the quill, but a small portion accidently adhered near the orifice of the wound. The small incision was closed by suture and adhesive plaster. The cupping-glass was applied on the sound skin over the poison, leaving the orifice of the wound outside of the circumference of the glass. The animal remained perfectly quiet, and did not manifest any symptom of poisoning during one hour. The cupping-glass dropped off at this time, but was immediately re-applied. After a further lapse of ten minutes, no symptoms having occurred, it was removed, and the rabbit placed at liberty. Violent spasms came on in two minutes. The cup being immediately applied, the convulsions ceased in five minutes.

The animal appearing entirely relieved from pain, the glass was again removed, at one hour and thirty-five minutes from the commencement of the experiment. The poison was apparently all cut out, and the wound washed, and closed by the interrupted suture and adhesive plaster. Eighteen minutes afterward the rabbit became again violently convulsed, and true opisthotonos was exhibited. This was succeeded by symptoms of an opposite character. All the muscles of the body became extremely flaccid, respiration was suspended, and the only sign of life remaining was a tremulous motion almost imperceptible at the nostril.

So completely prostrated were the vital powers, that several gentleman who were present pronounced the animal dead. The cupping-glass was now applied, the atmospheric pressure removed as much as possible by the constant employment of the exhausting pump; relief was afforded in eleven minutes. The effects of this application were very peculiar: at each motion of the piston, the animal appeared invigorated, and at the expiration of the time stated, he rose on his feet and attempted to walk. At this time I left the animal in care of an assistant, directing him occasionally to apply the exhausting pump, in order to maintain the absence of the atmospheric pressure. Upon my return, one hour and twelve minutes after the second re-application, the animal being placed at liberty, rose, and walked across the room.

The glass was removed at four hours and thirty-two minutes from the insertion of the poison, and two hours and thirty-nine minutes after the second re-application. The suture was cut out, and in order to remove any remaining portion of poison which had escaped the first excision, a portion of the muscular part was removed—the wound, which was of a very severe character, was dressed by suture and adhesive plaster.

The animal died on the second day after the experiment: not from the effects of the poison, as no symptoms of poisoning were exhibited, but from the extent of the wound and the intense heat of the weather.

Experiment 7th.—With the view of ascertaining whether the cupping-glasses would have any effect in preventing the action of poison when it was entirely without the circumference of the glass, we introduced one grain of strychnine through a tube to the distance of one-third of an inch beyond the space which the cup would occupy. The poison was deposited in advance of the cup, and nearer the source of the circulation, (the heart.) The orifice was closed by suture and adhesive plaster, and the cup applied over it: the glass remained on sixty-three minutes, during which time no symptoms of poisoning appeared. The poison was cut out a few minutes previous to the removal of the cup. In eleven minutes after its removal, spasm came on: which was relieved in five minutes by the cup. It was then removed, and the wound dressed as usual. The rabbit was free from spasm for two hours and thirteen minutes: violent tetanic convulsions and opisthotonos then ensued, but they were immediately relieved by the cupping-glass. The glass was applied at intervals during the succeeding hour. The rabbit then ate, and appeared well and lively. He died however in a few days, whether from the effect of poison, or the extent of the wounded and denuded surface, (as he had been the subject of a former experiment,) I cannot determine. The second day after this experiment, however, I observed no tetanic symptoms: on the contrary, he ate, and appeared lively.

Experiment 8th.—This was a repetition of the preceding experiment, except a difference in the mode of introducing the poison. With the view of diffusing it over the sub-cutaneous texture, and removing it beyond the space covered by the glass, I introduced a quill attached to a large syringe, and forcibly impelled and diffused the poison one inch from the orifice, which was then closed, and the cupping-glass applied over it, no symptoms of poisoning ensued. In fifty-five minutes the glass was removed. The wound was dilated, and the strychnine found diffused over the surface: almost the whole quantity being one-fourth of an inch beyond the boundary of the glass, The poison was removed, and the wound dressed. No morbid symptom appeared. The animal, immediately upon being released, ate, was lively, and, with the exception of the wound, was apparently as well and vigorous as before the experiment. He lived for ten days, and then became the subject of another experiment.

Experiment 9th.—This was the introducing of one grain of strychnine through a valvular opening in the skin of the left thigh of a rabbit, and the depositing of it by means of a tube at the distance of one inch and a quarter from the orifice. The cupping-glass was not applied until constitutional symptoms, such as the difficulty of respiration, spasmodic movements of the lower jaw, and tetanic twitchings were manifested. These took place in nine minutes from the insertion of the poison. All the symptoms yielded instantly to the application of the cup over the poison. The glass remained on for one hour and a quarter: the poison was then extracted through an incision in the skin; the wound was dressed, and the animal recovered.

Experiment 10th.—Six drops of the medicinal hydrocyanic acid, prepared by Farr and Kunzi of this city, were injected by means of a syringe into the cellular tissue of the thigh of a rabbit. In five minutes convulsive movements were manifested, accompanied by difficulty of respiration, prostration of strength, and a comatose state. In ten minutes death ensued.

Experiment 11th.—The same quantity of hydrocyanic acid was inserted as in the preceding experiment. The cupping-glass was immediately applied on the sound skin over the poison, leaving the orifice without the bounds of the cup. No ill effects during one hour and twenty minutes. The wound was then dilated and carefully washed. The animal being released, appeared free from pain and in perfect health. In a few days the wound healed.

Experiment 12th.—A small incision was made in the thigh of an adult rabbit, and one grain of strychnine deposited by means of a tube between the muscles and skin an inch and an half from the wound, and nearer the heart. The orifice was closed as usual, and the cupping-glass applied over it, leaving the poison nearly half an inch without the boundary of the glass. The glass was taken off at intervals during one hour, upon which, tetanic symptoms invariably appeared, which were always arrested by the re-application of the cup. Finally, when the animal was perfectly at rest, and free from all morbid symptoms, I made an incision through the skin, between the edge of the glass and the spot where the poison was deposited: the glass still remaining on the part. The rabbit was then affected precisely as if no cupping-glass had been applied, and death took place twenty-two minutes after the incision.

Experiment 13*th.*—In order to ascertain whether the cupping-glass, placed elsewhere, than over the poisoned wound, or its immediate neighbourhood, would, by acting as a counter-irritant, prevent the action of the poison, or relieve the symptoms caused by it, the following experiment was instituted.

One grain of strychnine was introduced in the manner previously mentioned, under the skin of the right thigh of an adult rabbit; the cupping-glass having been previously applied on the thigh of the left side. In sixteen minutes spasms appeared—in nineteen, violent tetanic convulsions, and in twenty, death. Hence, the counter-irritant produced no effect, either by allaying, retarding, or preventing the poisonous symptoms.

Experiment 14*th.*—Two dogs were selected for the purpose of ascertaining the efficacy of the application of cupping-glasses, in arresting the action of the slower poisons.

One of the dogs was large, full grown, and strong: the other was a small animal, under the middle size, and of less than half the weight of the first.

On the 16*th of August*, at nine o'clock, A. M. I introduced ten grains of the pulverized white oxide of arsenic, some distance beneath the skin and into the cellular substance of the thigh of the large dog. The edges of the wound were firmly united by suture over the poison, and the orifice covered by adhesive plaster. The animal was then muzzled, and abandoned to his fate.

The same quantity of arsenic was inserted into the thigh of the smaller dog: it was introduced through a glass tube of a large caliber, and deposited as in the first instance, and the wound closed with the same precautions.

Forty minutes after the insertion of the poison into the thigh of this dog, he began to whine, manifested some symptoms of pain, attended by a considerable discharge of saliva. The cupping-glass was applied a few minutes afterward on the sound skin over the poison, leaving the orifice of the wound without the boundary of the glass. The vacuum was maintained during the day, and an assistant left in charge to watch the animals and persevere in the application of the cupping-glass during the night.

August 17*th.*—No symptom decidedly indicative of poisoning having occurred in the larger dog, although twenty-four hours had elapsed since the insertion of the arsenic, I determined to introduce a large additional portion of the poison. Accordingly, opening the original wound of the large dog, and making a fresh incision in the thigh of the other, I inserted into the respective openings, in immediate contact with the first portions, thirty grains more of the arsenious acid. Every precaution was taken to secure the orifices of the wounds. The dogs were fed and supplied with water, of which they drank large quantities. They were then muzzled as before.

In the course of a few hours afterward, the large dog exhibited symptoms of pain, restlessness, intense thirst, and great muscular debility, particularly of the hinder legs. The pain became more and more intense, and nausea, vomiting, and purging continued during the night. On the morning of the eighteenth he died—twenty-three hours after the insertion of the additional portion of arsenic, and forty-eight from the commencement of the experiment.

The other dog was subjected to the application of the cupping-glass during the whole of the 17th, and at eleven and a half o'clock, P. M. he was lashed down by rope and bandages, and his mouth secured; hoping, by this expedient, to retain the cup on him during the night. He however severed the cords, and the cup fell off, the assistant supposed, between four and five o'clock, on the morning of the 18th. On the 18th, at nine o'clock, A. M. whilst the large dog was dying, I excised the poison from the smaller animal, washed the wound, closed it by suture and adhesive plaster. The dog lived and did well; seven days afterwards he became the subject of another experiment.

Upon examining the dog which was killed, the mucous coat of the stomach was found highly inflamed, the sub-serous tissue of that organ, as well as that of the intestines generally, was congested with blood. In both ventricles of the heart was contained very dark-coloured blood. In the examination of a portion of blood from the heart and vena cava, I was assisted by my friend Mr. J. P. WETHERILL; but we did not detect the presence of the arsenious acid.

Being desirous of rendering more generally useful, the method of preventing the fatal effects of poison by the exhaustion of cupping-glasses, I resolved to institute a series of experiments on the bite of the rattlesnake.

Messrs. T. and F. PEALE, with their accustomed liberality granted me the use of a very fine snake, *(Crotalus horridus, banded rattlesnake,)* nearly five feet in length, whose bite on the smaller animals they had observed to be almost uniformly fatal. My first experiments were performed on the 20th of August; two rabbits, whose hinder extremities had been previously shaved, were presented for the bite. The first rabbit was bitten twice; on the back and hind leg. The second was bitten, an hour afterwards, on the thigh.

The first soon manifested signs of great muscular debility, and lay on the unbitten side: he remained motionless and comatose, showing no symptom of uneasiness for six hours, except when laid on the wounded part: he then struggled violently. He died without presenting any of the appearances of swelling and petechiæ which are usually mentioned as concomitant with death produced by the venom of the rattlesnake.

The second rabbit was affected during the day with severe rigors: these were the only symptoms observed. They had entirely subsided before the ensuing morning, and the animal was then perfectly well.

On the day succeeding the last experiment, another rabbit was bitten by the same snake: the snake bit twice with violence: one of the wounds was on the upper part of the thigh, the other lower down. The incisions were marked by a minute effusion of blood. This animal exhibited no morbid symptoms, but continued from the first as lively as though nothing had occurred to him.

The rattlesnake was now suffered to remain undisturbed for three days, in the hope that by this expedient the poison would accumulate in sufficient quantity to produce death. A small dog, from whose hinder limbs the hair had been previously shaved, was then placed within the cage. He appeared panic struck at the sight of the snake, and lay as though deprived of the power of motion. The snake struck at him with great reluctance, and not until he became exceedingly irritated by being pushed and teazed by sticks passed beneath the dog's body. The dog received two wounds; one on the upper anterior part of the thigh, the other on the lower part of the leg. Upon his removal from the cage, he recovered from the torpor caused by the snake's presence, soon resumed his usual sprightliness, and did not subsequently manifest any morbid symptoms.

The result of the preceding experiments having proved to me that the fatal consequences from the bite of the rattlesnake were altogether uncertain, I determined to adopt a different plan, which gave greater promise of certainty.

Supposing that the poison might not always have been fairly inserted beneath the skin by the bite of the snake, I determined to procure one, decapitate it, and making an incision through the skin, insert the venom beneath it. By the aid of a distinguished naturalist, I selected one of the finest snakes from a large collection then exhibiting in this city. The animal remained undisturbed for some days, in order that the secretion of poison might accumulate. His head was then struck off by a single stroke of a chisel, and as soon as the convulsive motions of the jaw had ceased, Dr. Harlan inserted the venom found in the bag around the fang, into two rabbits and a dog.

One of the rabbits died several days afterward, but under circumstances which rendered the cause of his death very doubtful. The other rabbit and dog did not exhibit any signs of poisoning.

Not willing to abandon the research on the effects of the poison, and hoping to succeed in procuring it possessing a fatal power, I purchased another snake. This was decapitated: about ten drops of a viscid fluid of a yellowish-green tinge, was found in the poison bag. This was injected through a glass tube, with a capillary extremity beneath the skin and integuments, and to the depth of one-eighth of an inch into the muscles of the thighs of three rabbits. None of these animals died in consequence. From these experiments it is evident, that the fluid existing in the sac and secreting organs of these snakes was entirely destitute of active poisonous properties.

The difference of the habits of the animal whilst in captivity, from those of a state of nature, and the want of a proper subsistence for several preceding months, are doubtless among the causes producing the inertness of the secretion. These results furnish additional evidence that the supposed specifics for the bite of a rattlesnake owe their reputation to their having been used in cases wherein no fatal effects would have resulted.

The want of success in obtaining an animal whose bite would infallibly produce dangerous consequences, compelled me to defer any further investigation of the subject. To this postponement I have consented with reluctance. I hope, however, to renew the experiments under more favourable auspices, and I am sanguine in the belief that the results of the application of cupping-glasses will be precisely analogous with those, mentioned in the preceding details of experiments on other poisons.

Such were the effects observed by Dr. Barry, in his investigations on the bite of the viper. He made experiments on rabbits and dogs, and found that "the animals bitten by one, two, and sometimes three vipers, when the cupping-glass was applied for half an hour, suffered none of the effects whatever of constitutional poisoning; whilst those that were left to nature were invariably attacked with convulsions, stupor, and the dogs by vomiting." That "the local action of the viper's venom, so marked and rapid in its effects, seems to be concentrated by the cupping-glass within its own bounds—that the vacuum sucks a reddish serum in considerable quantities through the skin of animals in which it is thin, and almost invariably in these cases the poison appeared to have been removed from the wound."

We now proceed to offer some remarks on Dr. Barry's theory of the modus operandi of the cupping-glasses, etc.

Agreeably to Dr. Barry's view, external absorption is not a vital function, but it, as well as the circulation in the absorbing vessels, is a physical effect caused by atmospheric pressure, the fluids passing through the absorbents precisely as a liquid is forced into, and rises into a Torricellian vacuum.

Dr. Barry, in support of his opinions, appeals to the series of experiments: the truth of the results of which, as stated by him, I have had the pleasure to confirm. His view, however, of the modus operandi of the cupping-glasses in preventing the effects of external poisons are, I am induced to believe, entirely erroneous.

The results of some experiments which I instituted with a view of testing the principle, whether their efficacy *depends merely on the abstraction of atmospheric pressure*, have convinced me that such is not the fact.

It is true that the exhaustion of air from within the bounds of the glass, relieves that portion of the body inclosed within its periphery from the usual atmospheric pressure: but the parts *beneath* the *circumference* of the cup, suffer an increase of pressure proportionate to the diameter of the glass. Thus the glass which I used, being one inch and a quarter in diameter, the animal suffered an increase of pressure on the parts just indicated of at least fifteen pounds.

Convinced of the truth of this position, and supposing that increased pressure, rather than a diminution of it, was the cause of the arrest of the poisonous action, I instituted the following experiments:—

Experiment A.—I inserted one grain of strychnine into the cellular tissue of the thigh of a small and feeble rabbit: the poison was introduced through a quill to some distance from the incision in the skin, and there deposited. Pressure equivalant to fifteen pounds was immediately made over the poisoned surface, by applying to it the leg of a chair loaded with the abovementioned weight. No symptoms of poisoning occurred during the first forty-five minutes, and supposing it possible that the strychnine had not its usual poisonous character, we determined to test it on another rabbit of about the same size and vigour. One grain of the poison having been inserted into the thigh of this animal, and he left to his fate, he died in five minutes. It was thus determined that the strychnine now used, was more virulent and energetic than any previously employed.

No symptom of poisoning having been evinced by the first rabbit during fifty-two minutes after the application of the poison, the pressure was discontinued, and we removed all the strychnine that was visible. A small portion probably remained, as tetanic spasms occurred in seven minutes after the removal of the pressure. By the re-application of the weight, these convulsive movements were immediately arrested, and no morbid symptoms were presented during the continuance of the pressure, which was maintained for thirty minutes. Releasing the rabbit, spasms again ensued in eight minutes: the tetanic action was violent; he appeared soon after to be dead, and life could scarcely have been recovered had not pressure been immediately applied. This, however, instantly revived him, and he remained free from spasm during the ensuing forty-five minutes. Two hours and twelve minutes having elapsed since the first exhibition of the strychnine, it was determined to remove the pressure and abandon the animal to his fate. He died in four minutes afterwards.

It is due to my friend Dr. Comstock to acknowledge that I am indebted to him for the suggestion of this experiment.

Experiment B.—A modification of the preceding experiment was effected by applying pressure on the surface poisoned with strychnine, by means of a cupping glass unexhausted, and loaded with a weight of fifteen or eighteen pounds. The pressure was continued for one hour, during which no morbid symptoms were discovered.

Experiment C.—One grain of strychnine was inserted as before. Pressure was made on the poisoned surface by means of a small screw press acting upon a cupping-glass applied over the poison, and continued for an hour and ten minutes, during which time no evidence of poisoning was exhibited. The poison was then removed: the animal appeared perfectly well, and I observed him healthful and lively three weeks afterwards.

The results of these experiments are strikingly analogous to those produced by the application of exhausted cupping-glasses, and they induce me to suppose that it is an increased pressure upon, or in immediate proximity to the poisoned surface, which produces most of the beneficial effects which have been ascribed by Dr. Barry to the mere abstraction of atmospheric pressure.

The experiments of Dr. Barry do not therefore appear to militate against the position, that absorption is a vital function—that the contents of the absorbents are propelled by some power inherent in the vessels themselves, or by some mechanism immediately connected with them.

Poisons externally applied appear to act upon the general system, and produce constitutional effects, either by the influence of sympathy or by absorption. Admitting these causes, it appears to me, that we have a solution of the problem of the mode of action of the cupping-glasses by attributing it to pressure; which produces either suspension of nervous action of the part, or compression of the capillaries.

Of these two causes, the first, or that of the paralysis, or suspension of the nervous influence, is probably the most efficient. Many of the most active vegetable poisons act probably altogether by producing their specific effects on the nerves. This point is uniformly conceded as regards prussic acid: and it appears more than probable that such is the fact as regards strychnine. This is in accordance with the opinion of Drs. Lawrence, Harlan, and Coates,* and I am compelled to adopt the same views from my own observation of its effects. Did it act otherwise, and if the poison entered the venous and absorbent systems, how would it be possible to arrest the violent tetanic action, as evidenced so repeatedly in Dr. Barry's researches, and as exemplified in the present series, in experiments 6*th*, 7*th*, and *A*.

Hence, considering the fact as established, that some poisons do act on the general system entirely through nervous agency, I would infer, that if the function or action of the nerves communicating with the brain and spinal marrow, with the surface that has been poisoned, could be suspended, the deleterious effects of the poison would not be exhibited. Now this arresting of the poisonous effect is observed when the cupping-glass, or other pressure is applied; and is, I presume, dependant upon the condition just indicated. On the other hand, in the case of those poisons which produce death by entering the absorbents, a similar hypothesis may be adduced.

Every part of the animal system appears to be under the influence of the ganglionic or cerebral system of nerves: if therefore the nerves of a part be paralyzed, or have their functions suspended, may not absorption be interrupted? In the circulatory system we have an analogical illustration, which I would suppose satisfactory. I allude to the absence of hæmorrhage in severe lacerated wounds: here although great injury may be done to the parts, and in some instances, limbs may be torn from the body, and arteries of the largest class be divided, yet little or no blood escapes. Is not this effect owing to the paralysis of those nerves, upon which the circulatory action of the blood-vessels depends? If this be the fact, is it not fairly deducible from analogical reasoning, that by the same agency the circulation of the absorbents may be interrupted? And have we not good reason to believe that this state of the nerves may be induced by *pressure?*—whether applied directly by weight, by ligature, or by the exhausted cupping-glass?

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* See their experiments. Philadelphia Journal of the Medical and Physical Sciences, Vol. II.

The application of the foregoing principles and experiments to practice in the treatment of poisoned wounds, has been detailed with so much precision by Dr. Barry, that it would be superfluous for me to say any thing on that subject. But, during the investigations herein detailed, my attention has been forcibly directed to the astonishing effects which are produced by the application of the cupping-glasses, in arresting tetanic symptoms:—even where decided opisthotonos has been exhibited, we have witnessed a subsidence of the symptoms, by means of pressure thus applied. I therefore venture to propose it, as one of the means of combating that terrific disease, traumatic tetanus. This variety of tetanus appears to be occasioned by the injury sustained by the sentient extremities of the nerves of the part wounded. It has occurred to me that if these wounded and irritated nervous extremities could be paralyzed, the general spasmodic action, which is produced by the local irritation, would be arrested. *Would not pressure by weights, or ligatures, or the application of exhausted cups over the wound, or in its immediate vicinity, paralyze the sentient extremities of the wounded nerves, and thus suspend, and perhaps remedy, the general spasmodic action?*

If the constitutional symptoms should be arrested; as a security against their return, *before the cup over the wound* is removed, an incision so extensive as effectually to remove the wounded portion of the nerves ought to be made.

Thus have been detailed the results of an investigation, which I hope will not be considered altogether profitless or uninteresting. The inquiry has been directed entirely to the attainment of a knowledge of physiological facts without reference to any preconceived theory, and the results have been stated with candour and truth.

Note.—In the course of my investigations, I have had occasion to observe several of the phenomena cited in page 10. In one instance, having divided the internal jugular vein of a dog, for the purpose of introducing a tube, jets of blood were observed to issue from the lower portion of the divided vein, at intervals which were synchronous with the expiration from the lungs. After this phenomenon had continued for nearly two minutes, the animal experienced great difficulty of respiration, and died very shortly afterwards, manifesting all the symptoms of strangulation. Upon dissection, the right ventricle of the heart was filled with blood, unlike that usually found in that cavity; being red, spumous, and apparently arterialized. The cause of the animal's death was now sufficiently obvious: the atmospheric air had entered the cavity of the heart through the divided vessel.

Another circumstance connected with the venous circulation, is also worthy of being mentioned. In an unsuccessful attempt to repeat the celebrated experiment of M. MAGENDIE, on venous absorption, one of the platina tubes by which it was intended to form the channel of communication in the femoral vein, was forced so far upwards within it, as to be beyond our reach. Upon searching for the tube, it was found as high as the right auricle of the heart!! This tube was two and one-eighth inches in length, and weighed thirty-two grains.

Assisted by Mr. CHEW, student of medicine, I afterward introduced into the right femoral vein of a sheep, a platina tube, one inch and one-fifth in length and weighing nineteen grains. The animal did not subsequently manifest any symptom of pain or uneasiness. He was killed about thirty minutes after the insertion of the tube: upon examination, the tube was not discovered in the entire tract of the iliac vein, nor in the ascending cava, nor even in the right auricle of the heart. It was finally discovered, however, in the larger lobe of the left lung.

Philadelphia, November, 1827.

ART. II. *Remarks on the Endemic Diseases of Alabama.* By J. W. HEUSTIS, M. D. Author of Physical and Medical observations on the Topography and Diseases of Louisiana, and of Medical Facts and Observations on the Endemic Fevers of the Southern states.

ALTHOUGH there can be little doubt that the origin and prevalence of particular diseases are connected, as cause and effect, with certain conditions of the atmosphere, yet in what these morbid changes and states of the respirable medium which surrounds us consists, appears, in a great measure, hitherto to have eluded the researches of philosophers. The plodding and indefatigable chemist, enveloped in smoke and combustion, pursues, with unchecked ardour, his scrutinizing search, in quest of the elementary substances of organized bodies, and exults in the discovery of a principle, or gas, that has hitherto escaped his less fortunate and successful competitor for fame. All nature and art are laid under contribution to administer to his curiosity and gratification. The more gross and palpable the subject of his experiment, the more easily are its nature and properties ascertained. But when man, in his researches, ascends from visible to invisible matters, or from earth to air, he soon discovers the insufficiency of his boasted wisdom. In vain would he attempt to analyze the causes of yellow fever, or to ascertain the peculiar composition of the atmosphere, as connected with the rise and prevalence of epidemic diseases. Nature, in her great laboratories, the air, and the bowels of the earth, is constantly effecting changes too subtile and recondite for the limited powers of human sagacity to discover. We have, however, yearly demonstration, that the appearance of certain diseases is connected with particular temperatures of the atmosphere. We know, for instance, that a long continuance of hot weather is necessary for the generation and prevalence of the bilious or yellow fever. But it is not so clear that other diseases of an epidemic character, as the small-pox, measles, &c. owe their origin to any particular temperature of the air. Correct registers of the weather have been kept by sundry individuals in different parts of the world during the time, as well as anteriorly and posteriorly to the prevalence of epidemic influenzas; from which it would appear that very different states of the atmosphere, as it respects temperature, have been connected with the prevalence of this disease in different times and places.

It is generally thought that a cold and damp air is more favourable to the production of pleurisies and catarrhs, than one that is dry and moderately warm. I am myself inclined to the belief that great vicissitudes, and sudden changes of the weather from cold to warm, and vice versa, are more instrumental in giving rise to the influenza, than any other cognizable condition of the atmosphere. Thus, I believe, it is generally found to be more prevalent towards the breaking up of winter, and through the variable months of spring, than at any other season of the year. In instances like the present, where ignorance is our only alternative, it would be more curious than useful, to inquire whether a change of temperature is alone concerned, or whether the origin and prevalence of influenza, are connected with certain contaminated and poisonous conditions of the atmosphere, like the intermittent and higher grades of the bilious fever. Until, however, philosophic experiments and researches become more perfect and successful, we must submit to the painful necessity of admitting that these subtile changes are to us unknown. Fancy may amuse herself, with airy speculations, and ascribe this and the other disease to certain noxious emanations from the bowels of the earth, to electric or galvanic influences, to a redundancy of one element or a deficiency of the other; but until faith has something more substantial than speculation to rest upon, the foundation must be sandy, and the superstructure ruinous and weak. The human mind is fondly given to theories, to erect airy fabrics of unsubstantial nothingness, and to paint and dress them in all the gaudy colours of an iris; glittering for a few moments in the sunbeams, and then vanishing for ever. In how many instances this has been the case the history of medicine furnishes, alas! too many instances. Perhaps, however, this is not a subject of regret. The mind of man, restless and unsatisfied, will seek amusement in one way or another. One finds it in the trifling sports of corporeal activity, another in books and lowly contemplation, whilst another, mounting his Pegasus, takes his excursive flight through the fairy regions of fancy, delighting himself with the play and beauty of the shining bubbles which his own vanity has inflated, till the rough touch of a rude blast scatters his playthings, and dissipates the charm.

With these digressive and preliminary remarks, I now hasten to the subject of the present communication. The winter of 1826, and 1827, was unusually cold, until the twentieth of January of the latter year. On new year's day the mercury in Fahrenheit's thermometer stood at ten degrees above zero. This for the latitude of 32° 20″, will be admitted to be very severe. There were several days, both before and after this time, during which the mercury fluctuated between ten and twenty at sun rise. Such indeed, was the continuance and intensity of the cold, that fig-trees were generally killed to the ground, with the exception of those whose age and large size secured them against the frost. The cold weather of winter remitted about the twentieth of January, at which time spring suddenly commenced in all its mildness, and the cold blustering winds of the north and north-west, were succeeded by the more genial breezes of the south. The weather, however, was by no means uniform and settled; a few days of almost summer temperature, would be succeeded by cool days and frosty nights; although there was scarcely a frost sufficient to injure vegetation, from the latter part of January until nearly the middle of March.

There were but few cases of influenza that occurred before the first of January. The disease most frequently came on with well-marked symptoms of pleurisy, in which the remedies for the latter disease were successfully used. In such cases the liberal and frequent use of the lancet was called for: the disease generally yielded to the fourth or fifth bleeding, to the extent of about a quart of blood at each venesection. After bleeding, a large blister plaster was applied to the affected region, and an active cathartic, as calomel and castor oil, calomel and jalap, or sulphate of magnesia, with an infusion of Virginia snakeroot, was exhibited. I made but little trial of emetics in this form of the disease, although they have lately been extolled as almost specifically efficacious in pleuritic affections. Such, however, have not been their effects within the sphere of my observation. It is true, that when the lungs have been considerably oppressed with phlegm, by assisting in the dislodgement and expectoration of this, they have sometimes afforded a temporary relief. In the pleuritic form of this disease, bleeding was more relied upon, and of greater benefit than any other remedy. Without this the usual antiphlogistics were of no avail. On this head I am fully warranted to speak decidedly, having in several instances seen the inefficacy of the diluting, sweating, emollient plan, consisting in the exhibition of hot herb teas, warm pediluvium, warm applications, and the usual diaphoretics, as Dover's powder, the different preparations of antimony, &c. One good bleeding was worth more than them all; and without it, they were entirely inert and unavailing. Such, indeed, is the usual character of the pneumonic affections of our winter season; being highly inflammatory, and, for the most part, requiring, in the first instance, the free use of the lancet. The quantity of blood to be extracted at any one time, must necessarily vary according to circumstances; and that, not so much from the age and habit of the patient, as from the effects of the operation. Enough should be taken away to cause an evident change in the state of the pulse, the skin, or the feelings of the patient. The pulse becoming softer and less strong, the skin moist, or the person complaining of sickness and faintness, though in a recumbent posture, (the situation in which he should always be bled,) are circumstances by which we should be guided in limiting the extent of the evacuation. In order to produce these changes, I have frequently been under the necessity of withdrawing three pints, and even two quarts of blood, at a single bleeding; and in so doing, I have often had the satisfaction of seeing a termination of the disease speedily effected, as if by a charm, when otherwise, from the timid and tardy use of the lancet, the disorder would probably have terminated in something like a phthisis pulmonalis, with a copious expectoration of mucus, bloody and purulent matter, and frequent exacerbations of fever.

A more frequent form of our winter epidemic is that of pneumonia, or peripneumonia notha. It is distinguished from pleurisy, by the pain being less acute, and experienced principally upon coughing. The means for subduing it, are the same as those of the pleuritic form: to this, however, there are one or two exceptions; as when the disease attacks persons of advanced age or of intemperate habits; in such, a state of collapse speedily succeeds the febrile excitement which ushered in and attended the early stages of the disease; here the lancet should be used, without delay, at the commencement of the disease, as a delay in the employment of energetic treatment may be productive of fatal consequences. The intemperate use of spirituous liquors, is very apt to induce a chronic weakness, sub-acute inflammation or obstruction of the lungs, which for a while may excite but little attention or alarm, but which upon occasion of *taking cold*, may be speedily succeeded by fatal consequences. I have found, upon dissection after death, the lungs of an inveterate dram drinker almost entirely destroyed, a portion of one lobe, only, retaining any degree of soundness, the remainder consisting of a membranous bag filled with grumous corruption, the stench of which was insufferable, and exceeded any thing I had ever smelt. In such cases gangrene sometimes occurs, and may be known by the sudden cessation of pain; the patient, when interrogated, saying that he feels much better; but the change for the worse is too striking to lead a person of any experience into mistake: the patient's mind becomes wandering; frightful and imaginary objects are constantly obtruding themselves upon his view; he starts with horror and affright, and cannot be persuaded that his fears and terrors are unfounded: his eye becomes vacant and staring, his lips and countenance livid, and his pulse tremulous and weak. When the disease in such patients does not terminate in this manner, the patient gradually sinks, or is carried off by suffocation, from an effusion of mucus into the lungs and bronchia, and inability to expectorate.

The pulse is not always a criterion of the necessity of venesection. Frequently considerable local inflammation exists with rather a weak and small pulse, or a pulse but little altered from its natural state. Here other symptoms and circumstances are to direct us in the employment of this remedy, as pain and difficulty of breathing; and it not unfrequently happens that after extracting one or two pints of blood, the pulse is found to become considerably stronger and fuller, so as to require a repetition of the operation in the course of two or three hours.

Sometimes, and not unfrequently, the disease of our winters seems to make its principal attack upon the head, which is affected with severe pain, extending from the forehead to the temples, ears, and jaws; the inflammation of the ear sometimes ending in suppuration, inducing a difficulty or want of hearing. In a few instances, this affection of the brain or head is so severe as to produce the most violent convulsions, which carry off the patient in the course of a few hours. All these different forms of the disease, require the free use of the lancet, especially in the first instance, although the pulse at the wrist may not seem to demand it.

It is not my design to give a detail of the various subordinate means of treatment employed in this disease, such as antimonial preparations, diluents, emollients, diaphoretics, &c. These may all be useful in their turn, after the severer symptoms have been subdued by the use of the lancet.

Though bleeding is generally required in this complaint, yet there are cases in which it is also necessary and important; as where the disease assumes the form of ordinary catarrh; here diluents and expectorants, after the use of a cathartic, may be sufficient to effect a cure. In such slight cases, however, the physician is seldom called upon to prescribe.

In this hasty sketch, it will be observed that I have generalized different forms of the epidemic of our winter as the same disease, whether appearing in the form of a catarrh, pleurisy, or peripneumony; the cause of all being probably the same, and the treatment similar, being more or less active and antiphlogistic, in proportion to the violence of the symptoms. Thus, when the disease assumes the character of ordinary catarrh, in which cough and mucous expectoration are the principal symptoms, a physician would scarcely deem it necessary to extract two or three pounds of blood, or to cover the breast with a blister plaster; yet should the complaint become aggravated, as is not unfrequently the case, the means necessary for the more inflammatory forms will then be required. Thus I have known persons affected for several days, with hoarseness, cough, and expectoration, to be suddenly seized with a high fever, with pain in the side of the head, jaws, and breast, requiring two or three bleedings, with other antiphlogistics to subdue it.

I would just remark that when the disease assumes the form of otitis, the most effectual means that I have found, after bleeding, is the application of a blistering plaster behind and below the ear: as soon as the vesications and the inflammation of the skin take place, the pain is generally relieved.

Remarks on Fever.—Those who wish to become more intimately acquainted with the fevers of the southern states, are referred to my work on that subject, published in 1824. It is not my intention, on the present occasion, to enter into an elaborate detail of symptoms, or to make a display of professional erudition and research, but to submit a few reflections and remarks, principally practical in their nature and application.

Fever, in the intermitting, remitting, or bilious form, usually commences, in this section of the state of Alabama, about the middle of June; becoming more general and extensive in its prevalence, with the progress of the season, attaining its maximum about the middle of August, without experiencing any visible mitigation, as an epidemic, before the last of September. The simultaneous appearance and prevalence of the intermitting and bilious fevers, seem conclusively to prove a similarity of origin and causes. These causes we know, from experience and observation, to be intimately connected with the season of the year; and as the heat of the weather is most intense between the months of June and October, we are hence obviously led to consider a high temperature of the atmosphere, as a *sine qua non* of the origin of the bilious endemic fever of our country. In the work above referred to, I have from a comparison of numerous authorities and facts, come to the following conclusion, "that a range of temperature from seventy-eight to eighty-six of Fahrenheit, is necessary to the production of the bilious endemic, or yellow fever; that the temperature should not fall short of 70° or 76° at night, nor of 86° in the heat of the day." Heat alone, however, is not sufficient to produce the summer and autumnal fevers of our climate. For there are numerous situations in the country that are seldom or never visited by the fever, though equally subject to the heat and influence of the summer sun. Hence, we are led to seek for the origin of this disease in some other cause or causes, less obvious, perhaps, but more immediate and essential in their operation. Upon a candid, full, and deliberate investigation, abundant evidence will, I think, be afforded satisfactorily to demonstrate that the essential and immediate cause of our endemic fevers, is intimately connected with the putrefaction and decomposition of animal and vegetable substances. I know that a different doctrine has lately been advocated by some respectable physicians, who pretend to deny entirely the influence of any such cause: and seem most clearly and learnedly to prove the truth of their hypothesis. This much I must be permitted to say, that the observation and experience of these gentlemen and mine, have been widely different: they may have facts to support them, but as these have never come within the scope of my personal knowledge, but stand in direct opposition to it; I must crave the liberty of differing in opinion from them. One tells us that the cause of fever is not the result of animal and vegetable decomposition, but heat or caloric operating on the cutaneous nerves, and thereby indirectly debilitating and disordering the abdominal viscera: another tells us that fever is owing to an electric cause operating, some how, on the nervous and sanguiferous systems. There are others, again, who, with still greater appearance of sagacity, pretend that the bilious or yellow fever is produced by countless myriads of animalcules, secretly introduced into the human system, and thence exciting it into morbid action. Moreover, we find some exceedingly wise disciples of ESCULAPIUS, who despising book-knowledge as pedantry, and the observations of the ancients as delusion and error, making a boast of ignorance at the onset, thus equally scorning the light of nature, and the aid of reason and philosophy—deny the influence and existence of all hitherto supposed causes, and frankly avow that they know nothing about them.

Perhaps it were best not to disturb the comfortable repose of these doubting philosophers; nor is it much to be regretted that their dreams are as noiseless as their thoughts are nugatory: but neither sleeping nor waking are they likely to disorder the opinions and doctrines of the medical world. It is unquestionably true, that many doctrines and notions of antiquity have been refuted and exploded by the improvements and discoveries of modern times. But it seems that great danger is to be apprehended from the strong propensity and disposition which the spirit and rage for innovation discovers to throw aside the shackles of restraint, to overleap the boundaries of established truth, to substitute speculation for argument, to embrace a modern error in preference to an antiquated fact, or to fold the arms in contented ignorance and supineness. For several years I have been an attentive observer of the rise and progress of the annual endemic fever of the United States; and every year am I more fully convinced of its septic origin. True, we frequently hear of the disease sometimes prevailing in what had hitherto been considered healthy sections and situations of country. But the glance of common observation is not the attentive and discriminating eye of the medical philosopher; the former views things in the aggregate, the latter investigates and considers them in detail. Where the common or poetical observer sees nothing but romantic groves, verdant vales, and purling streams, the scrutinising physician, whose business is in the haunts of infection and disease, beholds the lurking places of pestilence and death. And here it is necessary to remark that the work of decomposition, and the causes of summer and autumnal endemic fever are greatly more abundant in hot and tropical climates than in cooler latitudes; and this from the well-known fact that a high temperature is most favourable to the destruction of all lifeless organized bodies. To seek a different explanation of a matter so manifest to our senses, appears to me to be leaving the substance in quest of the shadow.

But, say the opposers of this opinion, it is probable that there are many changes produced in the circumambient atmosphere from the influence of solar heat, independently of those resulting from decomposition; and as we find animal and vegetable bodies frequently undergoing putrefaction, without producing disease, we must set aside this antiquated notion as a gratuitous assumption, entirely unfounded in truth or probability. In reply to this I would remark, that until these sticklers for innovation can give a more satisfactory explanation of the cause and origin of endemic fevers than that which traces them to animal and vegetable decomposition, I for one shall reject their vapouring as mere empty speculation. I admit that disease is not always engendered by the septic process of animal and vegetable bodies. But is there any general rule or law of nature that is not subject to variation? and is there any one more certain than the connection of endemic fever and decomposition? In the present imperfect state of medical philosophy, it could not be reasonably expected that every circumstance connected with the origin and nature of fever, or diseases generally, should be fully and satisfactorily explained. But because some things are difficult and obscure, is this a sufficient reason to reject the whole? Moreover, book-knowledge is often over much wise, dogmatical, and pedantic. A physician, perhaps, scarcely fledged in his profession, who has never in his life seen a case of yellow fever, but who, by the bye, think himself well skilled in the science of scholastic disputation, assumes the arduous task of laying down the laws and nature of epidemical diseases. Like certain visionaries of the present day, who pretend to delineate and describe the mountains and volcanoes of the moon; and who can even make sage conjectures upon the state of its internal improvement, its high-ways, bridges, and canals. Captain Symmes, wrapped in the transporting dreams of his subterranean worlds, is scarcely fit to hold a candle to these reading philosophers. The closet and the library is not the field for observation, these may serve as useful auxiliaries, but can never supply the place of actual experience. And yet how often do we find the learned book-worm set up his opinions as indubitable laws and principles in medicine. Every man is doubtless entitled to his opinion, be it erroneous or true, and as long as it is confined to the recesses of his own skull, the public mind is not endangered by it; but much study, observation, and reflection in important matters should precede their promulgation to the world. Let a skeptick who denies the influence of miasmatic emanations in the production of endemic fever, leave for a while his healthy residence and climate, and accompany for a short time the physician of the southern states in his nightly rounds over hills, and through woods and marshes teaming with noisome exhalations; and when he beholds fever around him in all its aggravated forms, let him then deny with what grace he may, the palpable demonstration of his senses. When riding at night, in my attendance on the sick, during the summer season, and when passing through swamps or low grounds of rich alluvial deposits, and even high tracts of country, where there was a considerable accumulation of leaves and decaying vegetable matter, I have often been assailed by exhalations of a pungent, noisome, ammoniacal smell, in some instances sufficiently strong to irritate the Schneiderian membrane, and occasion sneezing. And although fever is not always demonstrated by impressions made upon the olfactory nerves, yet I believe it will invariably be found that the vicinity of those places abounding with such noisome exhalations, will prove the certain locality of endemic fever. The sense of smell in the human race is not very discriminating and acute, and noxious exhalations may be too much diluted to make any distinct impression on our olfactories, and yet not sufficiently attenuated to be breathed with impunity. In our views, then, of medical topography, in relation to the causes of endemic fever, we are not to expect that every unhealthy situation will be clearly designated by the sensible impression of noisome emanations. In relation to this, the weather and state of the atmosphere have considerable influences. A humid state of the air has generally been considered the most favourable to the diffusion and noxious influence of morbific effluvia. And we hence invariably find in the summer season, that low, damp, and marshy places, which in the day-time were free from any disagreeable smell, at night became extremely offensive. I have always found this one of the most infallible indications of an unhealthy country or situation; and one which may be almost invariably observed in the swamps or rich lands of the southern states. The term *marsh miasmata*, has been given to such exhalations as give rise to the intermitting and remitting fever; and although it may be true, that such exhalations are generally evolved in greatest abundance from marshy grounds, yet as they are of a vegeto-animal origin, resulting from decomposition, it is clear that wherever the requisites of the process exist and abound, there also such exhalations will be generated. And although cases of endemic fever more frequently occur in, and near marshy situations, yet such places are by no means the only ones favourable to their origin. Thus in all parts of the country where there are bodies of rich land, though free from swamps and stagnating water, fever is a frequent occurrence. It might be objected that the prevalence of fever in such situations, affords an argument that it cannot be the result of decomposition. It is, however, a well-known fact, that wherever there is a great abundance of vegetable matter, there must necessarily be a great degree of decomposition. It is not necessary for this process that there should be present a constant stagnation of water: the humidity produced by rains is sufficient for this purpose. Hence we observe a diversity in the prevalence and localities of the fever in different seasons: a summer unusually wet being most favourable to the prevalence of fever in rich and fertile parts of the country, free from marshes and stagnating water; whilst it seems to have a contrary effect on low and swampy situations, by keeping the ground covered with water, by cooling the earth, and thus abating the process of decomposition. If others have observed the bilious and endemic fever of our climate prevailing in situations remote from the decomposition of animal and vegetable matters, and where this process could be considered as having no agency, it remains for them to give a different explanation from the causes I have assigned. As I speak from observation, I shall not pretend to answer the false facts or postulata of others. It is possible that they may have seen the disease prevailing in the sandy deserts of Africa or Asia: if so, their experience has been more extensive than mine, and they are left to explain the cause of its origin in their own way. There are unquestionably many species of fever which owe their generation to causes different from those of the common endemic of the southern states; with such, at present I have no concern; my business is with those that manifestly arise from animal and vegetable decompositions, as influenced by heat, climate, and other favourable circumstances. Having uniformly observed the annual endemic fever of the southern states to commence with the heat of the summer, in all situations favourable to its origin, and to abate and disappear with the cool weather of autumn, having also uniformly observed that places the most exempt from the causes of decomposition, were also the most healthy, I feel myself bound to consider this disease as the result of animal and vegetable decomposition; I say of animal and vegetable, for the countless myriads of insects and animalcules that inhabit the leaves and herbage of the fields and forests, preclude the idea of unmixed vegetable materials. This I have attempted to illustrate and prove in another place,* by numerous facts in confirmation of the same: and I would here merely remark, that until these facts are disproved by something more satisfactory and conclusive of an opposite character than I have as yet seen, I shall continue to entertain the same opinion in relation to this subject.

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* See Medical Facts and Inquiries respecting the Causes, Nature, Prevention, and Cure of Fever.

There is probably no disease more diversified than fever; and this not only as it respects the fevers in different climates and years, but even the fever of the same season, and often of the same neighbourhood and family, and even the same individual at different times. To the notion and definition of fever, we attach the circumstances of morbidly increased temperature and arterial action; nor would it comport with the popular and general notion, to say, that a person was affected with fever, when his skin to the touch was colder than natural, and when the pulse was irregular and preternaturally weak. Yet such is frequently the case in the high grades of the bilious fever. The patient is, perhaps, at first seized with a slight chill, succeeded by a febrile exacerbation of irregular and uncertain continuance, which in some instances is frequently repeated, and in others is speedily followed by permanent prostration and collapse. I have, however, never seen a case in which this state of prostration was not preceded by a stage of high excitement of longer or shorter continuance. The period of excitement or febrile exacerbation, is generally shorter in the more malignant cases than in those which are less dangerous and severe. This difference seems to admit of an easy explanation, for as an effect must bear a relation to the cause which produced it, it is evident that a cause sufficient to produce slight disorders and excitement in the sanguiferous system, by an augmentation of quantity or power, will occasion greater derangement and an increase of excitation. But it is a law of the animal economy, that any extraordinary action requires a proportional state and succession of quiescence. The diminished energy of the muscles of voluntary motion, induced by the exertion and labours of the day, is restored by the repose and inaction accompanying sleep; the momentary fatigue of the heart induced by its systole, is relieved by its diastole; but if the action induced by any cause, is excessive and too long continued, it is followed by a state of atony and exhaustion of vitality and strength. If then, agreeably to my opinion, the immediate or proximate cause of fever is a morbid stimulus or poison directly applied to the internal surfaces of the heart and smaller blood-vessels, the morbid and preternatural excitation thereby induced must be of longer or shorter continuance, in proportion to the quantity and virulence of the poison thus applied. The practical inference to be drawn from this, is, I conceive, of considerable importance; and it is this, that in the more malignant forms of fever, the lancet is only admissible at an early stage of the disease. No physician, I believe, but Dr. RUSH and his disciples, have had the temerity to advocate blood-letting in the typhous, or as I have thought proper to term it, the asthenic *state of fever.* The petechiæ, maculæ, vibices, hæmorrhagies, and extravasations of blood, the doctor supposed to be caused by the violence of the vascular action *tearing and rending the smaller blood-vessels to pieces.* But it is very strange that such an action should exist, and not be cognizable by any of our senses, but rather positively disproved by them. Are the coldness and the livid hue of the surface and extremities, the glazed, watery, and inanimate eyes, and the weak, thread-like, and faultering pulse, indications of strong and excessive vascular action? Who but the enthusiast would think of resorting to the lancet under such circumstances. In this state of the system, the period of primary excitement or reaction has permanently passed, and secondary collapse and atony have succeeded; the primary collapse being that of the forming stage of the complaint. It is evident that Dr. Rush either mistook the passive for the active stage of the disease, or that he was led into an error by his zeal in supporting a favourite hypothesis; a mistake, when carried into operation, productive of the most fatal consequences. The practice of venesection in the typhus or asthenic state of fever, is as improper and absurd as the exhibition of ardent spirits would be in the synochial or inflammatory stage.

As answering the same indication as venesection, that is, reducing the excitement or inflammatory action, thus bringing about an equilibrium, and enabling the system to throw off and discharge the pecant matter, cathartics are exhibited. The same exceptions, however, or to the same extent, do not apply to the exhibition of cathartics in the asthenic stage of fever, as were made to the employment of the lancet. This fact is well known, and admits of easy explanation. Venesection acts immediately upon the sanguiferous system, directly abstracting the stimulus and pabulum essential to the support of the vital functions; it is true, that a portion of the morbid matter may by this means be abstracted, yet the quantity, in proportion to the whole mass, is so small, that the benefit thereby resulting, would not counterbalance the debilitating effects of the operation. By the operation of cathartics, excrementitious and offensive matters are removed from the alimentary canal, which, from being retained in the bowels, would, by absorption, still further increase the contamination of the circulating mass. Besides we have reason to believe that the fluids drawn off from the bowels by the action of a cathartic, are, to a considerable degree, excrementitious. Such then being the nature of their operation, it might be supposed that they were adapted to all stages and characters of fever. Such, however, is not precisely the fact; for although in the asthenic or typhous state of fever, all offensive accumulations in the bowels should be prevented, yet this should never be effected by the operation of drastic cathartics. In the collapsed state of the system which frequently supervenes in high grades of the bilious fever, enemata are often all that the system will admit of, for the purpose of removing any excrementitious matters from the bowels. I have known drastic purgatives given in this stage, and have sometimes even exhibited them myself; but experience soon convinced me that the practice was injurious, and not unfrequently productive of fatal consequences. Enemata and mild aperients, as senna and manna, or small and repeated doses of castor oil, are all that the patient's strength will admit of being exhibited with safety. I am induced to make these remarks in consequence of the injurious effects produced on practice, in this particular, by the extravagant commendations lavished in praise of the efficacy of purgatives in typhus, in a little book, published by Dr. HAMILTON, of Edinburgh. Whatever benefit may have resulted to the public and to the profession in other particulars from this publication, I think I may truly affirm, that as it regards the exhibition of purgatives in typhus, it is calculated to lead to the most pernicious practice. I speak here of drastic or active purgatives, and of those in ordinary use, when given in the quantity and to the extent required in acute and inflammatory diseases. Had I not known in several instances the free operation of cathartics, to prostrate the patient from a hopeful state beyond the powers of recovery, I should not feel myself authorized to speak in so decided a manner. These remarks strictly apply to the asthenic or passive stage of fever, before the secondary reaction of convalescence has commenced.

Another error in practice, which I deem it important to notice, is the exhibition of tartar emetic. Perhaps there is no medicine in the catalogue of the materia medica that has been productive of such opposite effects as this; at one time, when exhibited under favourable circumstances, putting a stop to the progress of the disease at the very threshold; and at another, precipitating the patient as hastily into the arms of death. As far as my observation extends, I think I am warranted in saying that tartar emetic can never be prudently exhibited in the high and malignant grades of bilious fever. I am confirmed in this opinion from having seen and known so many instances of alarming, and sometimes fatal prostration produced by its exhibition; I have known a person in a high fever, with a strong and full pulse, and generally increased temperature of the body, in less than two hours after taking this poisonous medicine to be affected with a death-like coldness; the pulse at the wrist no longer perceptible, the eye inanimate, the lips, cheeks and extremities, exhibiting the lividity of death, a cold and copious sweat exuding from the general surface of the body, and every symptom of approaching dissolution. Where prompt assistance is at hand, these symptoms may often be removed by the use of stimulating remedies, as wine, brandy, infusion of bark, sinapisms, and hot applications; but when these means are neglected, death supervenes in a few hours. Frequent occurrences of this nature have for the last two years, almost entirely banished the use of tartar emetic from my practice; nor do I ever exhibit it except in the intermitting form of fever, or mild cases of remitting; and even in these instances experience has proved that its exhibition is unsafe, except in the recess or remission of the fever. ORFILA, on poisons, makes the following remarks on the effects of tartar emetic and other antimonial preparations. "It is to be remarked, that these preparations more particularly occasion copious and obstinate vomiting, large evacuations by stool, great difficulty of breathing, and often such a constriction in the throat, that the patient is unable to swallow any thing; finally, very painful cramps, a sort of intoxication, and a more or less considerable prostration of the vital forces. The preparations of antimony are often administered carelessly, because no danger is thought to attend their use. Experience, however, proves that tartar emetic, if it does not excite vomiting, may produce death when given in the quantity of a few grains; instances, indeed have occurred, in which an extreme prostration and debility have succeeded the administration of a single grain of this poison, when it has not occasioned any evacuation. Sometimes, on the contrary, and particularly in infants, it excites vomiting so copious and painful as to require an immediate arrest. Hence the imprudence of taking this medicine without the advice of a physician." It is true that in many instances of its exhibition, tartar emetic is not productive of these serious consequences; but admitting that such dangerous effects followed its administration only once out of every twenty cases in which it might be given in bilious fever, a proportion far too small, it will, doubtless, be conceded that this is a valid and sufficient objection to its use. The reputation of this medicine in the cure of fever is like that of certain quacks, who by good fortune, sometimes succeed where regular physicians have failed; these happy instances of success are sufficient to establish a character for a time.

until an experience too often fatal, has undeceived the popular credulity. It is likewise true, that tartar emetic is often, and indeed generally administered to negroes with safety and advantage. To this I would remark, that the constitutions of the negro and the white man are materially different; whether this is natural or the effect of the different modes of life, habits, and education, or all combined, does not so materially concern the present subject of discussion; of the fact there can be but little question. It is from this difference of constitution that medicines which would prove fatal to a white man, may be given to a negro with safety and success. Thus I have known, in more than one instance, a dose of Glauber's salts and tartar emetic in combination, prove fatal to a white man in less than three hours from its exhibition, whereas, on the negro they generally produce no alarming effects, and often give a speedy check to the fever, or at least materially mitigate the symptoms. Another reason why tartar emetic is more safe with negroes, is that in them the disease is less malignant; as I have already remarked that the more malignant the disease, the more danger is there in the use of this medicine, and *vice versa.* The objections to the use of tartar emetic in the high grades of bilious fever, are not equally applicable to its use in the intermitting and mild remitting forms of fever. In such instances there is not the same danger of prostration consequent upon its administration; yet even here it is unsafe for children and persons of delicate constitutions. In the severe and malignant grades of bilious fever, tartar emetic can never be safely exhibited except during the remission or apyrexia; but should such a remission not occur, its administration is altogether inadmissible.

There is another medicine which has been much abused, and which deserves a little attention, viz. *Calomel.* As a cathartic in combination with other purgatives, as jalap, rhubarb, or castor oil, calomel is a valuable medicine, especially for children, to whom it is often difficult to administer any of the more nauseous articles of the shop; but when it is relied upon, as it is by many, as the anchor of hope and salvation, and administered with the liberal hand of empirical hardihood, it becomes the duty of every benevolent physician to set his face against such a dangerous practice. I have known and seen many cases of salivation in bilious fever, but never have I known an instance wherein I had not every reason to believe that the recovery was thereby retarded. It is certain that patients often recover who have been salivated in this disease, and this, strange as it may appear, has afforded an argument for the advocates of this medicine to say and boast that the cure was effected by mercury; whereas, the probability is, that had the patient never tasted the article, or experienced its effects, his recovery would have been much more rapid. The unfortunate instances of the failure of a salivation in the cure of fever, are too numerous to leave any doubts as to its pernicious and destructive effects. The horrid spectacles frequently to be seen as the consequences of the mercurial treatment, are shocking to humanity, and disgraceful to the profession. Even were mercury the only alternative, that life is dearly purchased which is bought at the sacrifice of every thing that renders life desirable; the constitution broken and destroyed; the person maimed and disfigured, so that it is scarcely recognised by the unfortunate sufferer himself; an object of pity and horror to his friends. Deprived of their teeth, and perhaps of their jaws, we sometimes see these pitiable objects with distorted features, the jaws, cheeks, and palate having been partially destroyed by mortification, and the remaining portion cicatrized into an unsightly knot, with the mouth distorted from its natural position, and drawn obliquely towards the ear, and the lips and cheeks consolidated with the gums. It may be said in reply, that such effects seldom occur from a salivation, yet they sometimes happen, and rarely does it fail that the constitution escapes from a salivation without sustaining a lasting injury. Were it always in the power of the practitioner to control the operation of mercury, less danger would be sustained, or apprehended from it; but unfortunately, this is not the case. Calomel is often given to a great extent during the continuance of the fever without producing any sensible effects, and it is only after the solution of the disease, when convalescence is about taking place, that this latent poison breaks forth with tenfold violence. The patient, who a day or two previously, flattered himself with a speedy recovery, now finds himself sadly disappointed, and is doomed to undergo a factitious disease, more tedious and painful than the first.

Art. III. *Remarks on Epilepsy, with a report of the state of the Encephalon, in two cases examined after death.* By Thomas H. Wright, M. D. Physician to the Baltimore Alms-House Infirmary.

THE present state of medicine, in all its departments, is the result of such contributions, as the researches, observations, and discoveries of the members of the profession, in different countries, and at various periods, have induced, or enabled them to offer to the general stock of medical knowledge.

Among the motives to such contributions, may be ranked most of the incentives which influence the conduct of men in the busy scene of social, and especially of public life. Zeal, in the cultivation of science, and the illustration of important truth, has perhaps as much influence in prompting the enterprise, and stimulating the labours of the medical, as of any other profession; possibly it would not exceed the limits of truth and justice, to assume, that no other human pursuit has been cultivated from motives of purer devotion to the cause of science, nor any with a diligence sustained by more laudable perseverance, or directed to more useful ends. Yet it would be uncandid, and it is by no means necessary, to exclude altogether the natural springs of human action, pride, ambition, and interest, from all participation in the motives which have led to the accumulation and display of the various and valuable stores of the medical profession—its science and resources.

It has not been, and it could not be, the happiness of any individual, however enlarged his understanding, or extensive the field of his observation and inquiries, to construct and perfect a scheme of medical science, fully equal to the comprehensive operation which that science affects. To give it stability, scope, and efficiency, has required, and still requires, the concurrent efforts of many cultivators, the impartial record of many and various investigations, the free interchange of opinion among those engaged in the same pursuit, and the multiplication of facts calculated to fix the principles of the science, and regulate their application. Hence, the propriety of establishing, and keeping constantly open, depositories for the record of observations, and even speculations, in medicine; that a science never stationary, defined by no positive bounds, nor restricted within any known limits, may receive its due share of cultivation from those who desire to aid its extension and improvement. That thus, "the labours of many devoted to one end, may serve like light shining from various places, to illuminate the objects of pursuit and inquiry."

In this point of view, the contributions of all who aim to promote the important purpose of the science, acquire a relative degree of value. And even those who neither pretend to instruct the informed, nor aspire to the distinction of giving a new direction to professional opinion and conduct, may yet presume to record the results of their own experience and inquiry, and modestly present to the notice of others, what has seemed to themselves, either of useful application, or curious and interesting. In this class of contributors to the great professional edifice, toward the construction of which, time, and the honourable industry of its members, have already accomplished so much, the majority of writers on the subject of medicine must be content to take a station; emulous of no greater credit, or higher commendation, than to merit the privilege of acting in concert with those who are endeavouring to improve, adorn, and dignify a profession which contemplates so much for the happiness of mankind: a profession which has acquired, and deserved the appellation of the most benevolent of the sciences.

The preceding considerations suggest themselves as the proper apology for a voluntary entrance upon the public discussion of professional topics, and may serve as a plea of indulgence for the offerings of those, who have much to learn, and but little to teach.

On the subject of epileptic affections, nothing satisfactory is established; and for the common treatment of that disorder, we are still standing very much on the ground of a purely empirical practice. The general inefficiency of all modes of management, shows the imperfection of every scheme of pathology and practice, applied to the disorder; and perhaps the nature of the affection excludes the rational expectation of greater ultimate success. This is a discouraging view of the subject; but while the train of impressions under which the phenomena of this disorder are evolved, continue to elude research —affording neither any obvious mode of excitement, nor any sensible condition of structure, from which we might infer the nature and effect of the disturbing cause, we are thrown upon the resort of conjecture, as to the kind and manner of impression, which gives occasion to this singular malady.

The pathology of epilepsy is obscured, rather than rendered intelligible, by the fact, that although in some instances the disorder is associated with circumstances, either known before, or discovered after death, by which its phenomena can be referred to a cause or state, obviously tending to derange the œconomy of the brain and nervous system; in other cases nothing is manifest to any mode of investigation by which we may learn the predisposing, or exciting cause; or trace their influence on structure or function. That dissection can throw no light on the researches of pathology in many such cases, is a position assumed on the authority of the most respectable reporters on morbid anatomy; by whom instances are recorded in which there existed no manifest deviation from the healthy condition of the encephalon, and in others, traces of disease appeared so faint and equivocal, as to leave their connexion with the previous morbid state, and its consequences, unsusceptible of any satisfactory illustration.

From the result of all the dissections I have hitherto prosecuted with a view to discover the cause or condition predisposing to epilepsy, or the kind of lesion by which that form of disease had involved a fatal issue, I am led to the inference that the sensorial irritations exciting epileptic phenomena, are more frequently dependant on organic degenerations of the brain or membranes, than is generally supposed, or admitted. In every case examined, (but few in number, and those cases very strongly marked,) there existed morbid states of the encephalon, obviously fitted to illustrate the nature and history of the preceding disease. Two of those cases seemed worthy of special report, and will be found detailed in another part of this memoir.

Although impressed with the opinion resulting from my own investigations, as far as pursued, that either constitutional or casual imperfection of the organization of the brain or membranes, is a frequent, if not general concomitant of established and regular, or as far as the term will correctly apply, idiopathic epilepsy; I am not prepared to deny that epileptic phenomena may result from other causes, than defect or degeneration of structure. Those phenomena may be, and probably often are, symptomatic of irritation merely; irritation either commencing in the sensorium or radiated to that focus of excitement, from affections of remote structures. It is probable also, that a peculiar constitutional mobility, or such a state induced by causes, which while they tend to exalt the excitability and irritability, at the same time impair the tone of the whole system, may prepare the way for that kind and degree of disturbance and tumult in all the functions, which attend the development of the epileptic state. And it would seem possible that such a state might exist, and proceed to the extent proposed, without producing any primary or consecutive embarrassment of structure, as would constitute actual lesion of the sensorial organization.

Irritation once carried to the result in question, involves a tendency to the same state under similar or equal exciting causes; and the proclivity thus induced, may pass on through a train of morbid associations, until a habit of disordered action becomes established, almost the same in frequency, force, and difficulty of removal, with those forms of the disease, which depend on radical defect, or irreparable degeneration of structure. Whether the variety of the disorder under consideration, may proceed to a fatal issue by repetition or intensity, without any degree of organic lesion, admits no certain determination. It seems very possible that an organ of so much importance in the vital economy as the brain, may be so greatly disordered in function as to cause death, without exhibiting any sensible traces of unnatural condition.

I should thus be disposed to distribute epileptic cases under two species or varieties, the organic and irritative: terms intended rather to distinguish conditions of the system under which the disorder is developed and maintained, than to mark any actual diversity or discordance in the nature of the disease itself, however produced. The intrinsic pathological character of all modes and forms of epilepsy, are no doubt the same, and whatever be the predisposing or exciting causes, all their effect is resolved into a certain final result, a kind and sum of irritation, which constitutes the essential feature of the disorder. Some peculiarity in the manner in which that irritation displays its influence in individual instances, is of no moment in the question. Whenever the equipoise, or order of the healthy sensorial function of the brain, (whatever that function is,) is shaken or lost to an extent beyond the control of the organ, both its own actions, and those of the various systems with which it is associated in office, betray the tumult and disorder arising from disturbance in this great centre and source of natural vital motion. And the kind and manner of that tumult and disorder will be according to the nature of the disturbing cause, or rather according to the kind, (necessarily inscrutable,) of interruption, suspension, or change of function, into which the organ has been forced. The general symptoms will correspond with the particular character of functional derangement occurring in the brain, and whenever after, the state of that organ becomes the same, as when the particular disordered motions first arose, association will revive the original phenomena, both in its own functions, and all those over which it holds dominion.

The pathology of epilepsy proposed by most of the modern, and many ancient writers, rests altogether on the presumption of congestion. A preternatural accumulation of blood in the vessels of the encephalon, or according to the strict hydrostatic principles of circulation through the brain, now inculcated, congestion, or an unnatural fulness in some part of the vascular system of that organ. The doctrine of cerebral congestion, as the immediate cause of the epileptic phenomena is manifestly suggested and much sustained by the signs which precede, accompany, and follow, the paroxysm of the disorder. It derives support also from many analogies between the symptoms of epilepsy and those of other disordered states of the brain and nervous system, which seem plainly dependant on congestive embarrassment of the sensorium.

Admitting the full force of the presumptive indications of congestion in epilepsy, and the conclusive evidences of that state, as furnished by dissection in many fatal cases of the disorder, I am in doubt whether such pathology, even if correct in the general, is universally true. There seems some space for conjecture, that the apparent signs of cerebral congestion in epilepsy, may have led to a merely hypothetical admission of its presence, and that the disordered motions characteristic of that state may have arisen from a condition of functional error in the brain, independent of actual congestion. And it may be suggested also as possible that in fatal instances of the disorder, where congestion was manifestly present, the effect or final consequences of the morbid actions, has been assumed, rather than proven, as the primary cause or occasion of such actions. Congestion in those cases may have followed irritation and disordered actions of the sensorium, rather than preceded or induced them.

I am forced into some degree of skepticism as to the correctness of the position, that vascular congestion of the brain is the uniform precursor of epilepsy, from the consideration of some circumstances in the epileptic state, not easily explicable in that presumption. If we omit all regard to the fact that in some instances no traces of such congestion were discoverable on post mortem examination, there remains a question in the doctrine of congestion, of difficult solution. When we attend to the forms of epilepsy as it is constantly occurring, and observe the disorder maintaining its paroxysmal character with almost periodical regularity of occurrence, (and often at very brief intervals,) for even many years together, are we to suppose that there has been in such cases a periodical vascular congestion, which occurring, as it were, in a moment ushers in the disorder, and in a few moments recedes or departs, and leaves the brain free to resume its dominion and functions. Is vascular congestion, occurring to an extent sufficient to overwhelm the functions of the brain, so fleeting and transitory a state, as to come and go almost in a moment, and is it so harmless a condition as to be renewed or repeated so often, and for so long a time, and yet leave no serious or permanent impression on the health or economy of the structure invaded? Instances of epilepsy have occurred, and some have fallen under my own observation,* where the paroxysms recurred almost daily, and were said to have done so for a course of years without obvious injury of the intellectual or vital and animal functions. Shall I say that in those cases the vessels of the encephalon were subject to something like a daily congestive sanguineous tide or flux producing epileptic symptoms, and by an almost immediate reflux of the same tide, permitting prompt and complete relief from those phenomena. It is very well known that in established and chronic epilepsy, the paroxysms occur and run through their forms or modes of disorder, without, (in the general,) any attempt either to arrest or mitigate them. The interference of art seems to be considered as commonly unnecessary or inefficient, and for the most part the patient recovers without assistance, whether by the exhaustion or ceasing of the irritation, or by some reactive energy of the brain and nervous system, we are wholly ignorant. But the fact that complete recovery occurs so promptly, and so often, without any thing being done to relieve or remove vascular congestion, justifies a suspicion that such congestion does not necessarily exist. It has been already said that congestion of the encephalon sufficient to cause extinction of sense and consciousness, is a state which we may suppose not apt to pass off without the use of means for its removal, nor likely to be frequently removed without serious injury of structure and function.

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* A singular case lately came under my notice, which I regarded as a variety of epilepsy, and might be termed épilepsia diurna. A woman, aged thirty-two,

My own surmise on this obscure subject is briefly that the common forms of epilepsy, those occurring independent of any permanent fault of structure in some part of the encephalon, rest on merely functional disturbance of the brain and nervous system, and for the most part are not preceded or excited by any appreciable departure from the ordinary state of the organization. It seems not an extravagant license of conjecture to suppose that irritation of the brain not sufficient to give rise either to congestion or inflammation, may cause

was subject to daily attacks of a convulsive disorder in the following manner:—She would be seized suddenly with an irresistible feeling of delirious excitement, utter a loud but inarticulate exclamation, and generally grasp and hold forcibly the object or person nearest within her reach. If attacked when sitting, she would sometimes start up and run to some object or person to seize on and support herself: she rarely fell at the first moment of attack. Her countenance during the paroxysm was wild and contorted, her consciousness for the time subverted, and body much agitated. In a few moments faintness would come on, and if not supported, she fell; but if laid down, she recovered sense and motion in a few minutes. These attacks had continued from the age of sixteen, (occurring first, as she thinks, from fright,) and the woman still exhibits as much understanding as is usual with persons of her station, is cheerful and active, menstruates, and in all respects, other than her distressing attacks as described, in good health.

great functional disorder of that organ, of which epilepsy may be one of the forms: and the irritation exhausted or overcome in one paroxysm may, cæteris paribus, recur or be repeated at various intervals, and for an indefinite time. Many forms of functional disorder, especially of the nervous system, have a manifest tendency to become more or less regularly intermittent or periodical. Those disordered states probably depend on their peculiar irritations, as in the intervals of such disorder of function nothing is apparent in the condition of the parts different from their natural state.

To make an intelligible discrimination between morbid states of structure, and error or change of function, it seems necessary that their should be something, in the state of the parts, to constitute the former, so far fixed and abiding, as to be in some degree apparent or traceable, if the parts can be subjected to examination: and certainly less equivocal or evanescent, than is very frequently discovered to be the fact in relation to the state of organs or textures, whose altered actions have been attributed to congestion, phlogosis, &c. In questions like the present, however, caution becomes necessary, to avoid being carried too far in pursuit of positive evidences of distinction. It must be apparent, that there is a difficulty in conceiving the occurrence or existence of great functional disorder in a part of the animal œconomy, without some deviation from the natural state in the condition of the structure, whose functions are abolished or changed. It is perhaps more strictly the kind, mode, and degree of structural affection or derangement, which becomes the true question, rather than whether the structure is wholly free from all violation or impairment.

It seems to me then, that a certain state of sensorial irritation, is the immediate cause of epilepsy, both in those cases where there exists a permanent condition of the encephalon, (vices of structure,) predisposing to such irritation, as well as in those instances where that disorder arises from other causes of irritation, than those of structural derangement. In both instances, the disease once produced, has, as was before remarked, a proclivity to return or be repeated; and seems only to require the irritability of the brain and nervous system, to be accumulated or exalted to a certain pitch, to give occasion to the disordered motions which constitute the disease. Thus, the paroxysms of the disorder, appear for the time to exhaust the extra or morbid irritability of the sensorium, and a state of repose ensues for a longer or shorter interval, but the irritability, or excitability, if the term be preferred, becoming again morbidly augmented, or increased to a certain point of susceptibility, the predisposing and exciting causes again concur to produce other paroxysms, or a renewed state of the disorder.

This train of cause and effect, modified in some respects by incidental circumstances, may continue for an indefinite time, and does continue to produce, suspend, and renew the phenomena of the disorder, with little variation and no decided consequences, until at last, the cerebral structure and economy debilitated by successive attacks, submit to some injury which they can no longer resist or repair. Or, what perhaps is more common, some new cause of superadded irritation eventually occurs, and either involves consequences never before present; or by the greater intensity of impression, overwhelms, almost at once, the capacity of the sensorium for resistance or reaction. It is under such circumstances perhaps, that serious vascular congestion occurs in epilepsy. The irritation suddenly and greatly augmented, congestive embarrassment ensues, and involves a fatal result, either promptly, by producing a species of apoplexy from great cerebral engorgement, or more slowly, by inducing inflammation, (cerebritis,) attended by great constitutional irritative excitement, and terminating in effusion. Congestion, which had either not existed at all, or had been partial and soon overcome in all the preceding attacks, occurs at last in many, (yet possibly not in all cases,) to a great degree, and proves directly or indirectly the occasion of the fatal issue.

Intending in the first instance, little more than a plain narrative of facts illustrating the history and termination of two interesting cases of epilepsy, I ought perhaps to apologize for indulging to such extent, the license of pathological speculation on the general character of the disease. But having lately occasion to observe many cases of the disorder a good deal diversified by circumstances, and apparently arising from various causes, I was undesignedly led to a farther range of discussion on the attributes and modes of the disease, than may seem on such an occasion proper or necessary. The subject afforded also, in some degree, the incentive of novelty to myself; for the course of my professional reading had not furnished more than very general views of that unfortunately frequent and intractable malady. Want of information on my own part, I am aware is an insufficient excuse, as there may exist good and satisfactory accounts of the disease, which I have neglected to examine. A few remarks on the common classifications of the disorder, with a brief account of the causes and general effects of a given number of cases now under observation, and I pass on to the original and principal design of this essay—the narrative of the cases reported.

Epilepsy has been divided into species and varieties, according rather with the peculiar notions of writers than clearly deduced from the proper intrinsic characters of the disease. There seems scarcely sufficient occasion for that more general classification, adopted by some intelligent modern writers, namely, into two species, designated under the arrangement of convulsive and tetanic epilepsy. The one form consisting in more or less complete loss of sense and intellection, with universal convulsive agitation of the voluntary muscles; the other, or tetanic form, marked by sudden stupor, loss of sense and consciousness, and rigid spasm of all the voluntary muscles, without convulsive movement. Possibly this discrimination may be warranted by examination of a large number of cases; but it would appear, that the tetanic form of epilepsy is comparatively rare. Of sixteen cases of chronic epilepsy existing at one time in the Baltimore Alms-house Infirmary, but one case possessed the predominant characters of the tetanic variety; and those modified in some degree in different paroxysms. A circumstance that renders the classification in question rather equivocal and indeterminate, is, that in some instances the two forms become blended and interchanged; and it will be found that when the paroxysms have commenced with tetanic characters, the convulsive form has supervened, and vice versa. The farther division of epilepsy by terms intended to show its relation to certain states of functional or structural embarrassment in particular organs, as uterine, intestinal, or hepatic epilepsy, has the fault of multiplying appellations for a form of disease essentially the same, however induced, but it has also the merit of pointing attention to some of the occasional exciting causes of the disorder, and may perhaps be properly retained, as tending to inculcate an useful range of inquiry into the circumstances of the system under which the disease was originally developed, or by which it may have been perpetuated.

An inquiry into the origin and history of all the cases of epilepsy existing in the Alms-house Infirmary, at the time this memoir is drawn up, gave the following result:—in six cases, (four males and two females,) the disease commenced between the age of thirty and fifty, and was attributed, by the patients themselves, to habitual intemperance. In four cases, (three males and one female,) the disease seemed constitutional; commenced in early youth; continued through every period of life, and in all the cases was complicated with a degree of congenital idiocy. In one case, (male,) the disorder occurred first at twenty-one years of age, commenced during a paroxysm of passion suddenly induced, was renewed at irregular intervals by the same cause, and ultimately became nearly periodical, occurring often independent of any obvious exciting cause, but was still liable to ensue, if passion or vexation was provoked. It seemed, in this case, that if anger broke out into passionate language and violent conduct, which sometimes occurred to an extent requiring personal constraint, the paroxysms of epilepsy were for the time averted; at least the intervals of the paroxysms were longer than usual, after such instances of intemperate behaviour. The disorder in this instance was uncommonly severe, and its attacks followed by great depression of spirits. The unfortunate patient seemed sensible of his infirmity of mind, and its consequences, and apparently anxious, but incapable, to resist the moral influences which tended to the production and continuance of his disorder. In one case, a female, the disease first ensued, in youth, to sudden and great alarm. Two other cases of the disorder, both in females, the disease arose between the ages of fifty and sixty, unconnected with every known predisposing or exciting causes. In both, the menstruous function had ceased some years before the occurrence of the disorder.

In a few of the cases above recited, the patients exhibited some degree of general atony; the countenance was pallid; the head affected by vertigo or obtuse pain; the muscular system lax, and inapt to exertion; the appetite impaired; bowels torpid, &c. This was chiefly the state of the patients in whom the disorder had occurred from intemperance. In the majority of the other cases, the health, except the disorder in question, was perfectly good; some of the individuals were among the most robust and healthy looking persons in the house. None of the subjects of the disorder showed any remarkable evidence of its effects upon their understanding or temper; in the intervals of the paroxysms, they were quiet and cheerful, and intelligent to the full extent of what might be expected from their station in society and means of acquiring knowledge. No obtuseness of intellect was manifest which seems referrible to the effects of the disorder; and obvious imbecility of mind, or defects of reason appeared only in those cases of the disorder associated with congenital fatuity.

This paper has swelled to such an extent, that I must postpone to another occasion, an account of the general treatment applied to the disorder under consideration, with the effects or result of the various means brought into use to avert or overrule this adhering, and too often unmanageable disease.

Case I.—A young man, aged about twenty years, who had been from childhood an inmate of the Baltimore Alms-house, was subject, as far back as his history could be traced, to epileptic seizures. The paroxysms were of the convulsive kind, irregular in the time of attack, occurring at intervals of only a few days, and sometimes more than once a day; paroxysms generally of short duration.

The subject of this case was of German descent, and though raised from boyhood in the Baltimore Alms-house, where the English idiom was used exclusively, he could neither speak nor comprehend that language. His person was of middle size, robust, and strong; his general health good, and appetite voracious; his manners indolent and reserved; great apparent torpor of mind; countenance vacant, and of somewhat idiotic expression.

The epileptic paroxysms came on at any period of the day or night without order, and independent of any evident exciting causes; often seizing the patient when eating his meals, and it was remarked that when thus attacked, the moment the paroxysm ceased he would rise and return with increased voracity of appetite, to the repast which had been interrupted by the fit. The paroxysms at first were followed by some degree of the coma, or stupor usually attendant on epileptic seizure, but it was afterwards discovered that the paroxysms could be abruptly terminated, and coma or stupor prevented, by raising and supporting the patient, and exciting him by loud speaking, together with smart shaking or agitation of his body.

About the first of August, 1827, the patient was attacked by paroxysms of more than usual force, and the fits were repeated at short intervals through the day and night, attended by a state of oppression or continued stupor not common after former attacks. From these circumstances it became necessary to pay more attention to his case than had been usually required. The convulsions were longer and more violent than at any time before, and the symptoms during the paroxysm indicate a high degree of congestive cerebral embarrassment. The arterial reaction in the intervals of convulsion, amounted to a considerable degree of feverish excitement; blood was detracted from the arm, until the febrile action was a good deal subdued, and cathartics exhibited to remove all causes of gastric irritation. Those measures produced no suspension of the paroxysms, nor any mitigation of their force, and it now became evident that serious mischief was threatened, either from the degree and continuance of cerebral congestion, or from inflammation and effusion. The general excitement, not perfectly free and explicit even at first, had now sunk considerably, the pulse was frequent, but soft and small, indicating a tendency to the state of collapse and exhaustion; under these circumstances it was thought proper to bleed locally from the temporal artery, which was accordingly opened, and six or eight ounces of blood thus drawn. The warm bath was directed, to be followed by enemata of tepid water containing a solution of assafœtida and tinct. opii, and an epispastic over the cervical spine. The directions could be but partially performed. The convulsive movements increased so as to become nearly incessant, though less forcible, and the patient expired about thirty-six hours from the commencement of the attack, as described in the preceding sketch of the case. The head was examined some hours after death: when the cranium was removed, the dura mater presented an appearance of great vascular congestion; the meningeal arteries throughout all their branches were distended as if by the most successful injection; on raising this membrane the surface of the cerebrum displayed a general, and very remarkable engorgement of all the superficial vessels of the pia mater, exhibiting over both hemispheres the appearance of a web, or dense net-work of vessels filled to their utmost capacity; the veins winding in the sulci between the convolutions of the brain distended with very black blood, while the intermediate spaces were overspread by arterial branches very florid from great injection. The substance of the brain generally, presented nothing unusual, except a highly vascular character; the ventricles contained no, (or very little,) fluid. While removing the brain by successive, horizontal sections, a cell or cavity was discovered, in the front portion of the anterior lobe of the cerebrum on the right side. The cell or cavity existing at this place was large enough to have contained one or two drachms of fluid, but was empty when discovered; or rather, contained only a small quantity of yellowish mucous matter, with which its interior surface was coated and stained; the medullary substance immediately around the cell, together with its dura matral covering, (the pia mater in front of the cell, were destroyed by ulceration,) were also tinged with the same greenish yellow hue.

This cavity or cell, seemed to have existed a long time, the result apparently, of degeneration of the brain at that point, occurring at some remote period. The direct cause leading to the formation of the cell or cavity in question, seemed susceptible of easy explanation, from a peculiarity in the interior surface of the cranium immediately opposite, and corresponding to the cavity. At this place a spine or tubercle of bone, projected from the middle convex point of the right fronto-orbitary plate, in such manner and to such extent, as to have been evidently a source of constant irritation to that portion of the surface and substance of the anterior lobe of the brain lying upon, and in contact with it. This spinous projection was pointed at its extremity, and seemed well fitted to produce the kind of lesion which existed in the contiguous portion of the brain; probably, irritation of the brain from this cause, was coeval with the life of the subject, involving the liability to the morbid train which marked every period of his existence. The patient was epileptic and idiotic from infancy.

It is among the mysteries of physiology, why a cause of sensorial irritation always present, and from its nature capable of acting constantly with an equal degree of disturbing effect, did not uniformly occasion the same results. The paroxysms of epileptic seizure were irregular, and after various intervals, seldom intermitting longer than eight to ten days; but the intervals, with the exception of the impotence of mind before noticed, were periods of apparently perfect health.

This unfortunate patient did not appear to have died simply from the direct and necessary consequences of the injury produced by the bony process, which had been so long acting as a mechanical irritant to the brain, producing a gradual, though partial disorganization of its substance. Some cause of superadded irritation acting on the system, and from the constant predisposition of the brain to morbid excitability, determined to that structure, had substituted an acute form of disease for the chronic disorder previously existing:—cerebritis, with inflammation of all the meningeal tissues, was distinctly traceable in the degree and character of vascular congestion, colour, &c. described as so prominently conspicuous over the whole surface of the brain, &c. The common result, also, of acute congestive, (inflammatory,) affections of the encephalon, were likewise present in the most explicit degree. On prosecuting the dissection to the base of the brain, serous effusion in very considerable quantity was found, filling the space below the tentorium, around the cerebellum and medulla oblongata, and gravitating freely into the vertebral canal. The quantity of fluid poured out, on depressing the head, so as to empty the cavities, was far greater than had been apparent in any dissection of the brain in its ordinary state.

Case II.—A black man was admitted into the Baltimore Almshouse, 10th August, 1827, in a state of insanity, and also labouring under complete amaurosis. He remained for many days after his admission in a state of constant vigilance and of delirious excitement, rendering personal constraint necessary to his own safety, and that of others in the same ward with him. His delirium continuing, it was found necessary to remove him to one of the cells appropriated to deranged patients. Here by time, and the exclusion of all causes of too great excitement, he became quiet, and in a considerable degree rational.

On particular inquiry now into his state of health previous to admission, and for some years antecedent, he stated that he had been for many years, but not in youth, subject to epileptic fits, of frequent occurrence; that about eighteen months before admission, his sight became impaired, and ultimately lost; that he had been liable, as he was informed, to temporary derangement after his fits, the derangement enduring sometimes only for a few hours, but occasionally for many days.

This patient's condition was a good deal remarkable; epilepsy, partial insanity, and amaurosis combined. His eyes were full and prominent, exhibiting no character of disease, except the wide dilated pupil, insensible to light. The humours of the eyes were translucent, and the tunics without a trace of inflammation or effusion. To particular inquiry whether there existed any remains of vision with either eye, he remarked that he possessed a partial faculty of distinguishing light, but not objects, with the right eye.

The character and connexion of the symptoms in this patient's case, seemed to indicate a cause of irritation and disorder of the sensorial system, so great and constant, as to create a suspicion of organic derangement in some part of the brain. And on the first examination of the case it was suggested as probable, that partial compression of the brain, most probably from development of a tumour in the substance of that organ, had induced the state of disorder presented by the case. It was farther indicated that the source of compression and irritation seemed referrible for its seat to the vicinity of the optic nerves, involving, by pressure on their trunks, the amaurotic condition ultimately induced.

The ground of the diagnosis delivered in this case was, that amaurosis, though an occasional, is a rare concomitant of epilepsy;* and it seems likely, that when thus associated, it for the most part depends on a morbid state of the cerebral structure, either from induration, abscess, or tumour, affecting the optic tracts or chords by ulceration or pressure. It is possible that amaurosis may arise from the effects of tumours, abscesses, &c. commencing at points of the brain, somewhat remote from the origins of the optic nerves; for it has followed encysted tumours, and abscesses of the cerebellum, and it may also sometimes exist independent of sensible organic lesion, in any part of the encephalon. But the very marked and prominent character, which the amaurotic state presented in the case in question, was peculiarly fitted to inculcate a strong conviction, that the optic nerves had suffered from some cause, immediately and powerfully affecting themselves.

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* Of numerous cases of epilepsy in the Baltimore Alms-house, in a course of some years, none, as far as can be ascertained, have presented such complication.

The patient remained for some months very much in the condition before described—at intervals, almost rational; then with mild delirium resembling idiocy; with epileptic paroxysms of irregular occurrence and various intensity; and with amaurosis at last so total as entirely to extinguish the faintest perception of light. About the middle of December, after an unusually long exemption from delirium, and epileptic attack, the patient was seized with paroxysms of the latter affection so severe as to be almost unintermitted, attended by stupor, from which, however, he could be roused to momentary consciousness, and great prostration. This state terminated fatally, on the day succeeding its commencement.

Whén the subject was placed on the table for examination of the head, there issued from the nostrils about two ounces of muco-purulent matter of a brownish colour, without sensible odour. The calvarium being removed a carious spot was observed, in the right parietal near its middle central point, which had penetrated through the vitreous table, the diploe, and nearly through the external table. Between the laminæ of the dura mater, at the point corresponding in situation to the carious spot just noticed, was found a bony, or rather calcareous deposit of considerable size. It was here remarkable that the portion or surface of the cranium opposed to this calcareous body, was carious and wasted, seemingly by irritation of that body, while the dura matral covering of the body itself was entire and unaltered. The dura mater over the whole surface of the brain, exhibited the highest possible state of congestion; all its vessels injected to their utmost capacity, and the membrane itself of a deep florid red throughout; the longitudinal sinus was turgid with blood, partly coagulated; the glands of Pacchioni enlarged, and of a dark, melanose colour and consistence.

The hemispheres of the brain being cut down to the level of the corpus callosum, and the ventricles opened, the right was found filled with water, the left empty. On attempting to raise the remaining portions of the anterior lobes of the brain, they were found to adhere firmly below, and could not be elevated without laceration. The lobes were then gradually sliced away until but little of them remained. This portion being lifted and separated as much as possible, a tumour was discovered arising from the sella turcica, (in the place of the pituitary gland,) and adhering strongly to its seat on the sella turcica, as also to the inferior and interior surface of both front lobes of the cerebrum. Clearing away all medullary substance from about the tumour, that body remained entire, firmly attached, as before remarked, to its place on the sella turcica, rising between the clinoid processes, swelling out into a globular form of a white colour, somewhat solid consistence, and in bulk corresponding nearly to a small-sized pullet's egg.

The situation of this tumour placed it immediately in the angle or space of bifurcation of the optic nerves, and its effect upon those nerves by pressure and irritation was very remarkable. The evolution of the tumour had been rather more to the left than the right side; of consequence, the pressure was greatest on the left optic nerve. That nerve was almost truncated, only a single filament remaining continuous. The colour of the nerve, also, for some distance from the tumour, was changed to a dirty yellow hue, and its consistence broken down to a soft pulpy mass, easily lacerable. The right optic nerve was wasted more than half through, and degenerated in colour, cohesion, &c. in a similar manner with the left.

The amaurotic condition of the patient during life, was fully accounted for, by the state of the parts just described; and a circumstance mentioned in the former part of this history, namely, that the patient possessed a partial sense of sight with the right eye, after all faculty of vision was lost to the left, is also explained by the relative state of the optic nerves.

The entire tumour was carefully dissected out, and when opened, was found to be of the steatomatous kind, partially suppurated. The cyst was very thick, and the appearance of the whole tumour indicated chronic duration and slow development.

It remains to be mentioned that in looking for the source of the matter which had flowed from the nostrils of the subject, in the first instance, it was discovered that there had been an extensive abscess in the frontal sinus, which communicated freely with the posterior nares, by a carious opening through the floor of the sinus, and through the os planum and part of the unguis—hence the route of escape for the matter.

The portion of dura mater which had been removed, to an extent corresponding with the section of the cranium, being stretched over another skull, and thus dried, presented a multitude of calcareous points, of various magnitude.

An interesting anomaly, occurring in the case of the subject of the preceding history, deserves to be noticed. The osseous system seemed to have undertaken an office beyond the natural limit or scale of formation; though that action or effort, could scarcely be considered the result of a morbid impulse. When the skeleton of the subject was cleaned, many deviations from the usual relations of the bony structure were prominently remarkable. Thus in the head, besides the ossific deposits on the dura mater, the anterior and posterior clinoid processes of the sphenoid bone instead of being separate and distinct, as is almost uniformly the case, were here, on each side, one continuous bridge, or jugum of bone, so completely consolidated that no mark or appearance of suture existed, to indicate the point of original contact or place of union.

In the next place it was discovered, that the transverse and oblique processes, together with the bodies of the three first cervical vertebræ, were completely anchylosed, and without the least mutual or relative movement with, or upon each other. On discovering this state of the cervical vertebræ, the pupils of the house were struck with the explanation it afforded of a peculiarity all of them remembered to have observed in the patient's manner, during life. This man always held his head very much raised, indeed rather thrown back, and when the head was carried forward or downward, it was effected by inclination of the whole body, the head still retroverted. Farther, when semiration of the head was designed, it was observed that the head was kept in the same erect, stiff attitude, and the pivot of motion seemed at the root of the neck, and not at all among the upper cervical vertebræ. All the circumstances here mentioned, relative to the peculiar attitude and confinement of the head, were attributed during the patient's life to rigidity of the muscles of the neck, or possibly a habit resulting from loss of vision. The state of the cervical vertebræ, showed that they were necessary consequences of the altered relations of the parts, and beyond the control of the patient's will.

The dorsal spine, although much less affected by this disposition to unnatural union, showed some traces of a similar tendency. The transverse processes of a few of the dorsal, and one or two of the lumbar vertebræ, were knitted together by bony fibres of considerable firmness. But it was among the pelvic bones that the tendency to super-ossification, was most decidedly manifested. The sacro-iliac junction was solid throughout, and the usual characters of synchondrosis wholly obliterated; so that an attempt made to separate those bones, after maceration, has caused a fracture, leaving a laminated portion of the ilium, an inch broad, indissolubly incorporated with the sacrum down the whole line of the original symphysis. The dorsum ilii was also studded with many points of exostosis: and from the edge of the thyroid foramen, all round, bony radiations advanced towards the centre, as if with the purpose of obliterating the foramen. Numerous strong bony radiations, also presented themselves on the crescentic edge of the ischium, the ischiad border of the sacro-sciatic notch.

Here then seemed an attempt on the part of the bony substructure of the body to transcend the limits, and violate the order of organization assigned to that structure, in its state of perfect evolution. This man was in the middle age of life, and it is curious to contemplate what might have been the ultimate result of such unnatural bone-connecting proclivity, had the subject lived to permit a full display of the actions of extra-formation. It was omitted in the previous account, that this patient during an epileptic paroxysm at some former period, by falling into the fire had burned one hand so severely, that the first and second phalanx of two of the fingers were lost in the gangrene that ensued: it was found on the skeleton that the remaining phalanges of those fingers were consolidated throughout, (as far as the phalango-metacarpal articulation,) by a firm bony bridge.

I have said in the first part of this report, that the formative actions of this patient's system, through displayed in excess, did not seem to rest on morbid impulse. The new formation every where presented the appearance of perfect osseous organization.

We read among the curiosities of the vital functions, of attempts occasionally made by the system in old age to recommence the work of organization, to repair or restore the decaying structure, parts are occasionally added, and lost parts in a degree renewed. Thus instances are reported of endeavours in advanced life, more or less successful, to restore the teeth, or adorn the head with a new covering of hair. But those attempts of the physical œconomy, like intellectual folly in old age, "point at a different mark from nature," are seldom successful but in a partial degree, and exhibit inherent defects, fatal to their design and duration. Man, and every animal, has the final limit of his organization and growth, determined by the original and immutable laws of his constitutional economy, and over those laws no casual circumstances can impress a change of character, or more than temporary suspension of influence. Even the majestic oak, the emblem at once of vigour and durability, completes its scope of ultimate expansion, and then dismembers and dies; yet not from defect of the materials of nourishment. The earth, and air, and sun, still offer their accustomed supplies. But its law of organization and increment have reached their maximum, their impassable point. Henceforth the scale of vital action becomes inverted, weakness succeeds to vigour, disease to health, the unsupported extremities languish and die, the vital principle contracts its sphere of action, and concentrates within the trunk, perhaps rallies its powers for a new effort, and puts forth some unexpected production of its reviving energy. But it is a late and last exertion; the failing tide of circulation flows on more feebly, until impoverished and effete, the lifeless mass stagnates in the torpid vessels. Its moving power is gone, extinguished in submission to a fundamental law of being imperative and universal, against which no energy of derived existence can defend, nor any resources avert or withstand.

The preceding case, besides its general interest as serving to illustrate in a very explicit manner, one of the forms of epileptic disorder, seems capable of furnishing some evidence on a question in physiology, lately the subject of discussion and controversy. I allude to the proposition of the commutability or transfer of faculty among the nerves of sense and motion, as advocated by some of the enlightened body of French physiologists, particularly MAJENDIE, SERRES, and DUMERIL. A doctrine of essential unity or homogenity of function in the nervous system, against which the British neurologists, especially Mr. CHARLES BELL, have opposed all the force of reasoning, and all the weight of experiment.

Adhering to the prudential maxim, "non nobis tantas componere lites," and abstaining from all pledge of opinion on a subject still in a great degree deficient of materials necessary to its illustration, it is sufficient simply to notice the facts in the present case, which relate to the matter in question. It was mentioned that the subject of this case was amaurotic. This was the fact when the patient was admitted into the infirmary, with the exception of a very faint perception of light with one eye, which seemed to be explained by a circumstance noted in the account of the dissection. Afterwards the unfortunate subject became wholly blind, and so entire was the destitution of all faculty of vision, that exposure to the strongest light produced no sense of its presence. A careful examination into the state of the nerves distributed to the organs of vision, showed an apparently healthy condition of all those nerves except the optics. The oculo-muscular nerves, the third pair, the fourth, and the first or ocular branch of the fifth, together with the sixth pair, all were, or seemed to be, unchanged, and in no obvious respect differing from their ordinary state. In colour, firmness, &c. they resemble the same nerves in other subjects. The conclusions is manifest that in the present instance at least, no vicarious or substitute office was assumed or performed by the oculo-muscular nerves; nor did any transfer of faculty obtain by which the lost function of the proper visual nerves was supplied.

Art. IV. *Two Cases of Injury of the Head, accompanied with a loss of Brain.* By Thomas Sewall, M. D. Professor of Anatomy and Physiology in the Columbian College, D. C.

Case I.—In February, 1827, I was called to W. Brown, a coloured man, aged fifty years, who, in a rencounter with another individual, had received a severe blow on the right side of the head with a sharp spade. When I arrived, which was only a few minutes after the accident, I found him bleeding profusely, and already so much exhausted from the loss of blood as *scarcely* to be able to support himself. Though not insensible, he had lost his reason, and appeared not to know how he came by the injury. On examination, I found a deep wound dividing the integuments, the whole of the temporal muscle penetrating the cavity of the cranium, and extending horizontally, from an inch above the external angular process of the frontal bone, through the parietal bone just above the squamous suture, forming a fissure of three inches in length. The lower portion of bone was considerably depressed, and the two edges separated about half an inch.

Two branches of the temporal artery were taken up; when, on a more critical examination, it was ascertained that the dura mater was divided for an inch in extent, and the brain penetrated some way into its medullary portion, which was easily distinguished from its cortical part.

Suitable dressings were applied, and he was conveyed home, about one mile distant, and placed in bed with his head and shoulders considerably elevated. From the great loss of blood, his pulse was feeble, and his extremities cold. Warmth was applied to the limbs, he soon became sensible, and complained of severe pain in the head, and vertigo. The most rigid antiphlogistic course was enjoined, and the patient placed under the immediate care of an intelligent student, who was directed to bleed and to purge in proportion to the reaction of the system, and with a freedom that should prevent any bad effects from subsequent inflammation. He was bled and purged daily for a considerable time, the circulation equallized by warmth applied to the extremities, and by gentle diaphoretic remedies given internally.

During the process of suppuration the brain protruded and sloughed away, and subsequently portions were removed by a spatula.

A few days after the accident, a second wound was discovered, which penetrated the integuments and the frontal near the median line, and about one inch from the coronal suture. This wound was apparently made by a small spear-pointed instrument, and was so large as to admit a probe to pass through the skull.

For about ten days after the accident, the patient complained of constant and sometimes of severe pain in the head; and on one occasion was affected with a slight spasm of the muscles of the face, neck, and extremities. The wound healed, and in six weeks the patient was quite well. He has since followed his occupation, that of scavenger, and has not manifested any deviation in the functions, either of body or mind, from their ordinary healthy condition.

Case II.—Sept. 18th, 1827, Lewis Pool, aged five years, while playing in the street, was kicked by a horse, and taken up in a state of insensibility. I arrived a quarter of an hour after the accident, and found a semicircular wound in the integuments of the head, and corresponding with this, a large fissure in the frontal and parietal bones, about three inches above the external angle of the right eye. Through this fissure a portion of brain protruded, something larger than a walnut, and was composed both of cortical and medullary matter, which were easily distinguished. This was so far separated from the parts beneath, as to be removed without any violence.

Light dressings were applied, and the patient placed in bed. The pulse was slow and intermitting, the pupil dilated, and the skin cold. Very little blood had been lost from the accident. In a few hours he became sensible; the pule rose, and he complained of pain in the head. He was bled to fainting.

Particular circumstances prevented the subsequent use of the lancet; but he was purged actively and daily for two weeks, and the pulse kept down by nauseating doses of the tartrate of antimony. Extensive suppuration came on with a copious discharge of pus; the wound gradually healed; and in about five weeks the child was quite well. He has since remained in perfect health.

Art. V. *Account of the Epidemic which prevailed in Charleston, S. C. during the summer of* 1827. By Samuel Henry Dickson, M. D. Professor of the Institutes and Practice of Medicine, in the Medical College of South Carolina. (Communicated in a letter to Dr. Hays.)

THE month of April was singularly dry, cool, and windy; scarcely ceasing, indeed, to blow a gale. Bowel complaints became frequent: in children, they were, as usual at this season, severe and obstinate, though rather less fatal perhaps than in the ordinary proportion; among adults, for the most part mild and manageable.

The temperature of May was not above our accustomed limit, and affords us no ground for referring to it as a distinct cause for the very early appearance of our miasmatic fevers. The thermometer ranged from seventy to seventy-six and seventy-eight, but this is by no means an uncommon degree of heat in spring. In our low lands along the whole southern coast, you are aware that the return of warm weather is productive of that distemperature of the atmosphere, to which we attribute, so confidently, the occurrence of so many forms of destructive disease. At this time our planters leave their fields and seek refuge and health in Charleston, or some of the sandy promontories or islands along our coast, or on some sandy ridge of pine barren. These stations they occupy until winter releases them from that restraint, and renders it safe to revisit their plantations. The period of this enforced absence, it would seem, has been encroaching more and more upon the early spring—yet, hitherto, it has been considered quite free from danger, and consistent with prudence, to remain in the country until the middle of May; the tenth of that month being fixed upon by a great number of gentlemen, as the day of departure for themselves and their families, in their retreat from the pestiferous neighbourhood of the inland swamps and rice fields, to the islands or the pine land settlements. But several individuals were attacked with severe bilious remittents, on their plantations, as early as the first days of this month, and a few died in this manner. I have noted also some similar instances originating *within the city;* the earliest marked cases of the kind that have ever fallen within my notice. We seldom meet with any notable number of bilious fevers within the city, except in the months of August, September, and October; and even in these months, in our ordinary seasons, they are neither frequent nor severe: although they prevail in our immediate neighbourbourhood, in the surrounding low country, and fiercely too, from May to November.

Perhaps we may attribute some of the evil influences, active in the production of early fevers, to the remarkable *dryness* of the spring. Many of the smaller and shallower ponds, and least extensive swamps and bays, so thickly scattered over the face of our low country, being dried up, and their muddy and fermenting beds exposed to the free access of sun and air.

The alternations of temperature in this month were great; the wind setting in from time to time from the eastward, blew cold and keen, and gave rise to numerous dysenteries, and other forms of gastric and intestinal disorder.

June, although it offered also many of these impressive vicissitudes of weather, was, on the whole, a healthy month. On the 22d, at noon, the thermometer was at 86°, (Fahrenheit.) Early in the afternoon, there came on a heavy rain, which lasted till dusk. Near midnight there was another shower: the wind shifted to the eastward, and it began to grow cold. On the morning of the 24th, it was as low as 60°.

Catarrhal fevers prevailed, though not very extensively; disorders of the bowels continued to be met with; and country fever, as it is called, became more common. A few remittents made their appearance on the neck, and a case occasionally occurred within the city.

July presented the most frequent showers and the greatest fall of rain, that I remember to have occurred. The low grounds were overflowed and the earth thoroughly soaked. The cellars about the city were full of water; which, after repeatedly emptying them, continued to collect again. Diarrhœas and dysenteries prevailed among us, though with no great violence or malignity. Some catarrhal affections showed themselves; and a few attacks of pulmonic inflammation, which required active depletion, a circumstance rare in our summer season. The city continued, on the whole, pretty healthy—the neck abounded with cases of fever, remittents and intermittents, which were, for the most part, easily manageable.

After the occurrence of so many premonitory circumstances, as are noted above, it did not require much of the spirit of prophesy to predict a sickly autumn. One of our old inhabitants has repeatedly made the observation to me, that he can foretell an unhealthy fall by the permanent fulness of his well—and the remark is a common one.

Accordingly, we find that *August*, from its commencement, showed a regular increase both in the number and the malignity of febrile cases, until the attention of the citizens was aroused by an announce-ment from the Board of Health, of the actual existence of yellow fever among us; this took place in the week ending on the 11th day of the month.

It has been the general fact with us, as in all other places in which yellow fever is endemic, that some particular spot or spots can be pointed out, as especially dirty, crowded, and ill-ventilated, and in which these circumstances account for the earlier appearance of the disease there than elsewhere. It is also usual, that from such point there is a gradually progressive extension, by the occurrence of cases succeeding each other. It deserves notice, therefore, that on this occasion several cases exhibited themselves about the same time; *eight* having been reported within a few days, and that they were met with simultaneously in several parts of the town, distant from each other, and most of them well known as salubrious positions; for instance, East Bay, Broad street, St. Philip's street, and in our Orphan-house, an institution in which the *proportion of deaths annually*, is perhaps as small as in any other institution in the world. The increase afterwards was also similarly rapid.

The temperature of August was for the most part very high, although there were some notable variations in this respect. The general range of the thermometer was between 82° and 90°. On the 18th, the mercury at 2½ P. M. was at 94° Fahr. in my piazza; exposed to the sun it rose to 120°; at 11 o'clock at night, in my chamber, with every window and door open it was at 88°; at 2 o'clock in the morning, (August 19th,) 86°; at half-past five 84°, at 7 o'clock 85°, at 1 P. M. 89°, at 2 P. M. in the sun and exposed to the reflection of the wall and pavement of the street 130°, at 4 P. M. in the same position 125°. These high temperatures, I think are fairly to be regarded as the generating causes of the disease, which cannot be produced without them; they act also, directly upon the constitution, both by giving predisposition, and by immediate excitement. On the 25th of the month there was a great change in the state of the air. The wind had been blowing from the north for some hours with violence, attended too with considerable rain. The thermometer was at midday, below 70°, and at 9½ P. M. had sunk to 66°; a fact without precedent, as far as I know, at this season of the year. In a day or two, however, the weather was again hot, and I did not note any remarkable effect from the alternation. In order to be clearly understood, I should describe to you some of the peculiarities of our peninsular position, and remind you of certain singularities in the history of yellow fever, as it prevails among us.

Situated on a neck of land between two marshy rivers, Charleston is thickly built up along the western shore of our eastern watercourse, Cooper River, for more than a mile from their junction. Along the eastern bank of the Ashley the houses are less crowded—the soil is more sandy, and somewhat higher. The former is the business part of the city, the latter contains chiefly private residences. A considerable portion of the ground in different parts of the peninsula is either entirely *made*, having been anciently covered by creeks which intersected it in every direction, or has been filled up much above its old level. The materials used for thus filling up low swampy lots have been various. We have no stone quarries near us, and this preferable article is therefore too expensive to be procured for such purposes. Pine logs, oyster shells, rubbish of all sorts, and even scavengers' offals constitute the general mass of the soil in these comparatively modern spots.

Our wharves too are built chiefly of wood, palmetto and other logs forming the frame-work or outline, which is filled up in the way above indicated, and with mud drawn by machinery from the shallow docks which they embank. You will readily infer that grounds thus *made* will be eminently fitted for generating and giving out deleterious effluvia. Accordingly, it is not difficult to denote the sections of our peninsula, which deserve to be considered healthy places of abode, and mark out such as bear a different character, and this knowledge influences the choice of residences and the value of rents. Harleston's Green, South Bay, the line of Meeting street generally, and that of Broad street, Cannonsborough, and a part of Wraggsborough being of original soil or sandy ridges, somewhat elevated above the ordinary level, and consequently drier in ordinary seasons, these, and especially the two latter are our healthy positions. It has been thought difficult to explain the fact that these favoured spots were apparently divested during the last summer of their privileges, and subjected to the general sway of our epidemic to a degree never before known, but I would attribute it without hesitation to the uncommon amount of moisture with which our lightest, highest, and most porous soil was thoroughly imbued from the immense falls of rain which took place in July and August. It is no new observation that in very wet seasons the low grounds escape the usual miasmatic diseases occasionally from their being entirely covered, while the more elevated districts in the neighbourhood suffer from an unaccustomed invasion of these maladies. Sir George Baker describes for instance an intermittent epidemic in 1780, in which the elevated parts of Lincolnshire were much harassed, while the inhabitants of the fens enjoyed an unexpected immunity.

In the more thickly built sections of our city, the construction of subterraneous drains or sewers which empty themselves into the bay or harbour, aids much in carrying away the water deposited on the surfaces of the streets by our heavy summer and autumnal rains, or thrown out from the cellars in which, as I have already mentioned, great bodies of water were rapidly accumulated. In the less populous wards, and in suburbs beyond the reach of these sewers, drainage is very difficult, if not indeed impossible, on account of the levelness of the surface, an observation which may be extended to the whole of the peninsula for some miles inland. Within our city, surrounded as it is by the sources of malaria, there is for the most part very little liability to fever, except in those seasons in which yellow fever is epidemic. Intermittents rarely, very rarely, originate within our bounds. Remittents are somewhat more common, but do not prevail more extensively than in other healthy places; they are not more rife with us usually, judging from the best information that I have been able to collect, than in New York or Philadelphia. On the neck, however, the case is different: intermittents and remittents abound, no season being free from their prevalence.

You are probably well aware that adult natives and old residents in our city, enjoy a happy and remarkable exemption from the attack of yellow fever, however extensively and virulently it may prevail among us. Hence the disease has obtained the common name of strangers' fever. Our children are subject to it until about the age of puberty, by which time they have acquired a certain degree of stability of constitution. Strangers are emphatically its prey, whether from Europe, from one of our sister states north of us, or even from our own interior country, and within a few miles of our city boundary. Nay, I have no doubt, that a person brought up in the very suburbs of our town, in Cannonsborough or Wraggsborough, or even in the city upon some of the healthy spots formerly designated as Harleston's green for instance, might by a removal to one of the lower sections, of less salubrious atmosphere, become liable to an attack of this pestilential disease. If I were writing a controversial treatise on this matter, it would be necessary to substantiate these opinions and enlarge upon the subject, but the character of this brief sketch does not demand it of me. One exception I ought perhaps to record to the general liability of strangers; I have never known an *African* negro to be attacked—their exemption is, I think, noticed also by Rush.

We do not meet here with *second attacks;* we believe them to be possible, if the individual, whether native or long resident, shall absent himself for a sufficient period of time to do away or alter that state of constitution, or that seasoning, as we term it, which has fitted him for our climate, and has become again a stranger. We are further universally and unanimously satisfied, that yellow fever never exhibits here any contagious tendency or power.

The last summer was remarkable not only for the epidemic prevalence of yellow fever, but also for the unexampled extent and frequency of our ordinary remittent. While our children and strangers were affected by the first, adults, natives, and long residents were seized with bilious remittents, which were spread universally over the peninsula. This fact has been vehemently urged by those who maintain the identity in nature of the two diseases, as establishing this disputed point; but it is not difficult to show the fallacy of their conclusion. The coincident prevalence of the two forms of fever to any great extent, is rare, as has indeed been already observed by RUSH and by IRVINE. We have frequently had the yellow fever existing as an epidemic in our city, when the surrounding country was even more healthy than in ordinary seasons, and when other febrile disorders were, to say the least, neither more abundant nor more fatal than usual. But if we even allow them the identity of cause, for which they vehemently contend, they have no right to infer from thence identity of nature in the morbid affections produced. The differences between diseases almost universally depend upon peculiarities of predisposition. One man exposed to cold and wet is attacked with rheumatism; a second under the same exposure, with cholic; and a third with pneumonia; the exciting cause of disease here being the same, the effect is not necessarily similar. It is the predisposing cause which gives essential character to any subsequent attack. We have not yet untied the Gordian knot which binds us in ignorance of the important circumstances which give and take away that state of predisposition upon which is built up each peculiar mode and form of disease.

The heat and moisture of our climate and position are abundantly powerful exciting causes of fever. The miasmatic exhalations from the low grounds of our rich alluvial country, give a special tendency to the remittent type of fever, and at the same time occasion derangement of the functions of the liver; there is something superadded to or mingled with this in the city atmosphere—a poisonous agent, the influence of which is determined to the mucous surface of the stomach and intestines, in subjects liable to its noxious power, and in these interferes with and destroys the disposition to the regular revolution of febrile periods. But as previous vaccination or the occurrence of small-pox, renders the constitution almost or altogether incapable of the morbid action of variola, so a former attack of yellow fever or a long-continued residence within an atmosphere contaminated in the particular way above alluded to, gives security by taking away, or blunting the susceptibility to its force.

I need not surely enter into a minute description of a disease so familiar to you in the writings of RUSH, PYM, CHISHOLM, and others, and which, you have indeed had personal opportunities to observe. I am more than half disposed to agree with the late Dr. MONGES, of your city, in regarding it as properly a gastro-duodenitis, rather than an idiopathic fever; yet I would insist upon the peculiar and specific nature of the morbid actions which constitute it, and which can be brought on by one cause exclusively—the peculiar vitiation of the atmosphere—the epidemic contamination to which we so familiarly allude when writing and talking of this subject; that is to say, I would maintain, that the inflammation of the stomach and intestines in yellow fever, differs essentially in nature and character from inflammation of the same surfaces, occurring in any other connection, and taking its rise from any other cause or source. And this doctrine offers a ready explanation of the tenacity and continuousness of the febrile excitement in yellow fever, which knows no remission, properly so called, terminating at length either in resolution or exhaustion of the system.

The cases as they occurred here, obviously divided themselves into two classes, which, following in part the method of ARMSTRONG, in his Dissertation on Typhus, we may distinguish into the inflammatory and congestive. In the former, the general appearances were those of more open excitement; the predominant symptoms, at least in the first stage, being such as we meet with in ordinary fevers; in this more manageable form, the proportion of recoveries was very great.

A certain degree of chilliness, for the most part—rarely a formed rigor—preceded the other symptoms, which, however, developed themselves with rapidity. There was head-ache, with a red watery eye—face flushed and tinged—nausea with retching, the act of vomiting being attended with much pain at stomach—there was a sense of heat or burning usually complained of in this organ, and pressure on the epigastrium could not be borne. The skin became dry and pungently hot—the pulse full, and frequent and hard. The tongue at first lightly furred on the surface, went through several quick changes of appearance, seeming swoln and soft, showing on its sides indentations made by pressure against the teeth; a brownish and dry streak extended along the middle of it, and the sides and lower surface assumed a dark, fiery red colour, which gradually pervaded the whole lining membrane of the mouth and lips, bearing much resemblance to one of the plates given by PARISET.*

In what I have called the congestive cases, the evidences of malignity are from the beginning more prominent, the patient often sinking at once prostrate before the excessive force of the morbid agent. The brain is sometimes principally aimed at—stupor and coma oppress the sufferer, who falls into a lethargic state from which he cannot be roused, or is carried off by convulsions. Instances such as these are happily rare. The stomach being attacked under this condition of the system, the appearances exhibited are exceeding similar to, or indeed identical with those which follow the administration of the most active poisons in powerful doses, all regularity of progress being lost in the overwhelming derangement of this important organ and its extensive sympathies. It is in cases such as these that we meet with the striking physiognomy of the disease by which alone it may be clearly recognized. The dark mahogany colour of the skin, the flushed and burning cheek, the swoln and tense forehead, the muddy glazed eye, the gloomy expression of countenance, which bears so remarkable yet undefinable a resemblance to that of intoxication, combined with sadness and terror; these constitute a picture highly impressive, and not easily to be forgotten.

I would particularly fix your attention on the doctrine which I have long advocated that yellow fever consists of but a *single* febrile paroxysm; this may, and does vary much in duration, (from twenty-four hours to seventy,) but whether long or short it is *single*—it is never repeated. To this point I have bent a most careful attention, and can affirm the rule to be distinct and regular. Even the apparent exceptions confirm its correctness. A patient has survived the first dreadful stage of excitement, and the no less terrible one of exhaustion succeeding it, which has been by so many so erroneously regarded as a remission—he occasionally exhibits after this in a greater or less degree certain febrile symptoms, but I contend, and it is easily shown, that this state or condition is the *consequence* of his previous circumstances, and by no means to be considered as a regular portion of the history of the disease, to which it stands in the same relation as diarrhœa to preceding measles, and dropsy to the obstinate intermittent which has occasioned it. If the attack has been mild, the patient emerges from the secondary state of transient collapse into direct convalescence; if it has been severe, he cannot thus recover at once, but must struggle with certain difficulties. There remains a degree of chronic inflammation seated in the tissue that has been subjected to active and violent vascular excitement, and this is of course attended by low irritative fever, being as truly sympathetic and consecutive as the secondary fever of small-pox, or the hectic attendant upon suppuration of the knee-joint. This secondary fever may likewise be occasioned by ordinary visceral obstruction, as of the liver or spleen which has resulted from the violent tumults of the first stage, and the derangement of the secretory function and organs thereby produced.

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* I saw two cases commence with furious mania.

From this condition, the patient under proper management, will generally recover, and we therefore hail universally as a favourable symptom the occurrence of any degree of secondary excitement. It sometimes happens, however, that he sinks after a few days, exhausted by the ceaseless irritation of this low fever; and at others, he survives still longer, to die at last of dysentery, diarrhœa, or dropsy. A still less degree of the same visceral disorder will allow an imperfect recovery of the patient, who may rise from his bed, and perhaps even resume his ordinary avocations, but his tongue continues foul, his appetite is irregular, his bowels costive, his frame languid, and his spirits depressed; his eyes and skin at last become yellow, and jaundice developes itself; from which he recovers for the most part without difficulty, if not very improperly treated.

It is singular, how universally our patients of the summer of 1824, were affected at the commencement of that winter with icterus, whether they had been ill of yellow fever, or of bilious remittent; whether they had been subjected to mercurial course, or had recovered under the use of any other remedial means.

But two of my patients of last summer, have exhibited the symptoms of subsequent jaundice. Both of them had laboured under regular remittent, of which one had been cured by mercury, the other without it.

A few cases of yellow fever this year, (all females,) suffered, during recovery, the most severe pains in the limbs, both muscles and joints, like rheumatism, so violent as to cause them to scream and cry out, and to require for their relief very free and large doses of opiates.

The black vomit dreaded by all, (and without reason regarded by some as giving character to the disease, and even as constituting its unfailing diagnostic,) was not wanting to complete the picture of our epidemic. It is always the signal of extreme danger —I do not hesitate to say, of a state or condition almost hopeless when connected with any form of inflammatory affection; yet the number of recoveries after its appearance, was this summer great beyond all former example. One of these was my own child, a boy of about four years of age; a second, a mulatto girl, belonging to my next door neighbour. A singular instance occurred in our Orphan-house, which I mention on the very respectable authority of the attending physician, Dr. LOGAN, in which the black vomit was thrown up during the convalescence of the juvenile patient, whose recovery did not seem at all retarded by the circumstance or its cause. A still more extraordinary case recovered under the care of the Drs. PRIOLEAU; their patient lived after ejecting the black vomit for *fourteen* successive days. The same fluid was also thrown up, and passed abundantly downwards, in a case of bilious remittent under my care, a young native lady, who afterwards happily recovered. I saw, during this summer, two forms or conditions of this dark matter, which were uncommon, or at least, new to me. Instead of the light flocculi, of which it generally consists, I found it, in a few instances, granular or pulverulent, and so heavy as not to float readily in the fluid with which it was mixed, falling to the bottom of the vessel like charcoal powder, which it much resembled. I saw also, for the first time, *figured stools*, composed entirely of this black matter, made into form and consistence, merely by a small quantity of intestinal mucus; the whole mass being, except in colour, of the usual appearance of a child's alvine evacuation.

The ordinary period at which the black vomit make its appearance, is about the third day—about the middle of the second stage; it occasionally, though rather rarely, occurs in the first or febrile stage. In the case of my son it was not later than the twenty-eighth hour, the febrile excitement still continuing high. In the instance of a particular friend, it showed itself about the twentieth hour, the earliest at which I have ever known it take place here. But the circumstances were peculiar. Under a degree of confusion of intellect, not uncommon among the very first symptoms of the attack, this gentleman took a dose of not less than ten grains of tartar emetic from the prostrating effect of which he never recovered.

The proportion of deaths in both our prevailing forms of fever during the last summer, was remarkably small—indeed, the success of all modes of practice was so unprecedently great, that we are induced to believe our diseases to have put on a much milder grade of intensity than they are usually invested with. Yet a few instances of extreme malignity were met with. In one case, in which the sympathies of the community were not a little excited—the child of a respectable physician, died in fifty-two hours from the commencement of the disease. Two persons in the same house, on the neck, died on the third day, within a few hours of each other. One of the first cases occurring in our Orphan-house, terminated about the sixtieth hour. I give you here a tabular view of my fever practice during the hot months, extracted from my case book.

	May.	June.	July.	Aug.	Sept.	Oct.	Totals.
Bilious remittent, . .	7	12	9	59	70	31	188
——— intermittent, .				3	1		4
Yellow fever, . . .				14	39	9	62
Catarrhal fever, . .	1	4		2	1	3	11
Infantile remittent, or worm fever, . .	2		3		2	1	8
Typhus mitior, . .					1		1
Totals, ...	10	16	12	78	114	44	274

Of these, the deaths were six. One of catarrhal fever; two of bilious remittent; and three of yellow fever.

In looking back upon the practice of the past summer, I cannot but take occasion to declare my unshaken and increasing confidence in the mercurial treatment of fever. I saw no patient die salivated. I saw no case which was not surely and at once alleviated as soon as ptyalism was brought on. That some patients died notwithstanding the free use of mercury is undeniable, but we do not claim for the remedy the attribute of omnipotence. That some suffer severely from it for a time is equally true, but this I cannot regard for a moment as an argument against it if it can be established, as I think it can, that a greater number recover who are subjected to its influence than under other modes of management.

I am in no danger of being misunderstood by you. I need not affirm that my dependence upon this powerful remedy is neither exclusive, miscellaneous, uniform, nor mechanical. The opponents of the mercurial treatment are apt to maintain with Good, "that it is useless in the severer grades of the disease, and unnecessary in the milder." Truth and reason compel us to add a third or intermediate class, in which it is an extremely important agent, capable of working miracles when skilfully directed, boldly employed, and aided by a judicious selection of auxiliary means. In the mildest order of cases it is certainly not required that we should resort to this or any other particularly energetic means, the powers of the constitution being sufficient to support the contest, and bring it to a successful issue. But it will often demand the utmost skill of the experienced practitioner to distinguish the truly mild from the insidious and fatally deceitful attacks, which, before they give notice of their force, shall have prostrated the energies of the system, and subjected it to irreparable havock.

The greatest injury done to the mercurial practice in fever, has been by those who have with candour and fairness instituted experiments with it; yet, not having pushed it to a proper extent, have failed to derive from it the advantages anticipated, and have accordingly made out unfavourable reports concerning it. As an example, I would refer you to the valuable paper of Dr. Jackson, of your city, upon the yellow fever of 1820. His fullest and freest administration of it was, if I recollect rightly, in the amount of five grains every third hour. This is not more, believe me, than a fourth of the requisite quantity in the ordinary cases. I prescribe not less than ℈j. at a dose, to be repeated every two, three, or four hours, and very often give ʒss. at the same intervals. My object is to exhibit the maximum quantity of the medicine—the largest amount capable of acting remedially. On this principle, I would not hesitate to administer an ounce at the dose if I thought that the stomach would bear it, and the system receive more readily its peculiar influences. I have long since ceased to entertain any fears of injurious consequences from the mercurial practice, at least in our climate. Among the hundreds and thousands whom I have seen salivated by myself and others, I have not known any permanent evil done to a single adult constitution.

I do not, I confess, think the remedy suited to the management of children generally, whose system seem to receive more readily, the injurious operation of mercury, and are less easily affected by it remedially; yet even here I have seen but one unfortunate case. I gave to an adult patient, in the yellow fever of 1819, one thousand and twenty grains of calomel during his illness. There was but slight salivation; his convalescence was not uncommonly protracted; he recovered perfectly, pursued his usual occupation as a carpenter, and enjoyed for many years excellent health. He has since removed from Charleston.

In this terrible form of disease we have but little time allowed us for action; every moment is precious. In the severer cases, the patient if unrelieved by art, falls into a hopeless state with the lapse of thirty, forty, or fifty hours. It has been objected to mercury that it does not act promptly enough to meet exigencies so pressing as these; but I have succeeded with the doses mentioned above, in producing ptyalism *repeatedly within twenty-four hours;** and often in thirty to thirty-six; in the vast majority of instances this will be sufficiently early to rescue our patients from impending death.

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* Armstrong in his able Treatise on Typhus, (p. 146, 2d Amer. edit. Phil. 1822,) tells us that by a similar though somewhat less energetic mode of management, we "most frequently obtain the alterative operation of the calomel *within* the *first* or *second* day.

I subjoin a few remarks upon the other remedial means employed in yellow fever, stating succinctly, the results of my own experience. Emetics I avoid on principle; believing inflammation to be present in the stomach, I will not subject this organ to the violent action of these medicines; I would however, except such attacks as may come on immediately after a full meal; here, if there was ineffectual retching, I could empty the oppressed stomach by a dose of ipecacuanha.

Cathartics are absolutely necessary. In the first stage the saline purgatives should be preferred; my ordinary formula is a solution of sulphate of magnesia in lemonade; the inflammatory excitement having subsided, castor oil should be substituted. I have found these articles sufficiently active, and they are at the same time mild and not irritating.

Venesection is occasionally indicated, but it is a remedy which promises much more than it performs. I place no great reliance upon it. The cold bath is an admirable substitute for it, and decidedly preferable, as procuring all the relief which the lancet will obtain for our patient, and allowing of frequent repetition; affusion is the most efficacious of the modes of bathing; the waters should be poured from a height upon the naked head, shoulders, back, and abdomen. Patients become exceedingly fond of this application, and are apt if not cautioned, to indulge themselves too often with it. It relieves the intolerable head-ache, thirst, and nausea; does away the extreme restlessness of the sick man, and gives him comparative tranquillity, and often brings off free evacuations by stool, and warm pleasant sweats. In the latter stages of this disease, the body may, with much advantage, be sponged with ardent spirits.

Diaphoretics are not usually of much importance. The best of this class of medicines, are the acet. ammoniæ, and the infus. rad. serp. The pulvis antimonialis, will, as has been remarked by O'Hallaran, remain sometimes upon a very irritable stomach, and determine agreeably to the skin. In general, however, antimonials are inadmissible.

Opium may be more freely employed, than one would be apt to imagine, previously. Indeed, I have been learning almost daily, lessons of the safe and advantageous exhibition of this divine remedy, in circumstances of fever, in which I had been taught to believe it altogether unadapted, and likely to do injury. After the first stage of highest inflammatory excitement is over, it may be administered without hesitation. I think the combination with camphor, &c. in the common paragoric elixir, the best form of prescription. It will frequently quiet the stomach when all our other means have failed, determines pleasantly to the skin, and often procures for our weary and exhausted patient, a tranquil and refreshing slumber.

External irritation, as an important adjuvant measure, is by no means to be neglected: and I fully agree with Dr. Daniel, of Savannah, as to the unequivocal superiority of sinapisms over epispastics, &c. These should be kept constantly applied, in greater or less number, to some part of the surface; and a centrifugal determination, as he has well expressed it, thus kept up steadily.

In fine, the history of our last summer's epidemic, must impress on every one who reflects upon it, the lesson of perseverance in professional effort. Recoveries took place from such unpromising conditions, that we never allowed ourselves to despond, or in any degree to relax our exertions. They afforded a glorious and most enviable triumph, when they did occur; and while they constituted the most gratifying reward for nights and days of anxious toil, they served to show forth the value and the resources of our divine science, the endurance and tenacity of the human constitution, and, above all, the infinite wisdom and benevolence of the Former of these wonderful and complicated frames.

Charleston, December, 1827.

Art. VI. *On the Safe Delivery of the Placenta, with some Observations on Transfusion.* By Samuel Jackson, M. D. of Northumberland.

THE safety of women in the perils of child-birth, has long been, and will ever continue to be, a subject of anxious solicitude to the whole profession; but particularly to the incipient practitioner, whose final success in general practice so often depends on a fortunate debut in the obstetric art. Of such great importance is this subject, that our private preceptor, the late Professor Barton, was accustomed to admonish his class to study midwifery with the utmost care; and, as it were, to make the most lasting impression, he always added this memorable sentence:—that the loss of a single woman in childbed, might well be dreaded as a fatal stroke to the reputation of a young practitioner.

Impressed, as we sincerely are, with the same opinion, we shall venture to solicit the attention of our readers, *in the first place*, to one point which we fear has been treated too lightly by some of the highest authorities; *and secondly*, to another, which has been condemned without those sufficient trials that experimental knowledge requires. The safe delivery of the placenta is the first subject to which we shall advert; and this will lead, by a natural transition, to the second, the interesting operation of transfusion. If the experienced reader find nothing which he has not seen in books, observed in practice, or anticipated in his own imagination, he may yet be induced to pardon our intrusion on his time and patience, while we endeavour to impress upon junior practitioners the necessity of putting forth all their strength, in the study of an art which may conduct them by the shortest way to honourable distinction, or lasting degradation. We must also endeavour to anticipate the reader's pardon for much that is known to the merest tyro, and yet cannot be omitted in the course of composition; as a certain connexion must be preserved, and sometimes an easy transition be effected, through points of knowledge familiar to every one.

To the mere student, however, this frequent reduplication is of no disadvantage; since it is only by viewing these subjects as presented by different hands and under as many different phases, that he can hope to acquire an adequate knowledge of the "confused and irregular operations of debilitated and disordered nature." It is not enough to commit to memory a certain routine of rules from any author, however excellent; the student must view the subject as presented to him by various writers, and make himself familiar, in imagination with every possible condition of the parturient system. It is with our science as with the religion of the prophet—we must have line upon line, precept upon precept, here a little and there a little; something to employ, continually, the reflecting powers, in order to keep knowledge awake and prompt in the mind.

With respect to our first point, *the safe delivery of the placenta*, it is said above that we fear it has been too lightly treated by some of the highest authorities. An opinion seems to pervade our writers, that very few cases are attended with any difficulty, and that a certain scientific delivery of the child will generally secure a safe and prompt expulsion of the secundines. Hence a multitude of rules are given, which are said to be founded on the principles of nature's own operations; and so efficacious are these considered, that Mr. Ch. White, after detailing them, thus complacently congratulates with himself. "In this manner I have proceeded for several years, and, during that period, I can with satisfaction declare, that in natural labours I have never had occasion for the manual extraction of the placenta; I have never left my patient till it came away, nor have I ever been detained a single hour by it; nor, since I practised this method, have I often had occasion for the use of opiates, to relieve the after-pains, which have generally been so trifling as not to deserve notice." *Chap. V. sub finem.*

Much to the same purpose may be found in other books, and yet we are bound to confess, that though we have followed the same rules of delivery, we have often had occasion for the manual extraction, often been detained, and not unfrequently witnessed after-pains that called loudly for relief; nay, we have, in a few instances, had much greater evils to contend with than these. We do not pretend to put our dexterity in observing these rules in competition with that of Dr. White—far from us be such arrogance; but what has happened to us may happen to others, and for the encouragement of such as are not eminently experienced and skilful, their compeer in experience and skill is willing to offer a few observations. A Denman or White, a James or Dewees, is not to be found in every village, nor is their ultimate dexterity to be required at ordinary hands.

We must here warn our readers, that we do not propose to fulfil the measure of a complete essay, or attempt to say all that can be said on the subject; and therefore we shall confine ourselves almost entirely to what we have personally known. We shall omit nearly every thing relative to physiology, pathology, etiology, and attend almost wholly to therapeutics. The divisions, therefore, of the subject will be few and simple—such only as are indicated by the process of cure.

Sect. I.—*Delivery of the Placenta, unattended by any improper Hæmorrhage.*

When a woman is delivered of her child, she will sometimes lie many hours without any return of the uterine action, or the pains that do supervene are too often feeble, irregular, or misplaced; but in a small proportion of cases they are very severe, and continue to distress the patient for a long time, without producing the desired effect. This state of things often occurs in the practice of midwives, sometimes occasioning much anxiety, but when it happens to the learned accoucheur, it is never permitted to continue long, unless in a certain peculiar and insurmountable difficulty. Women are always very anxious to rid themselves of the placenta, and modern practice will generally meet their reasonable wishes in this particular.

When the contraction of the womb is regular, but pains are wanting.

In this state of things the frictions, which were first recommended and pressed upon us by Dr. Dewees, will almost universally succeed in exciting the necessary action. Before we learned this practice, we were sometimes under the necessity of introducing the hand in these cases, which method always brought on pressing pains that quickly expelled both hand and placenta. But this never fails to occasion too much pain, and it comes with a very ill grace at a time when the woman is in hopes that all her distress is past. Hence we cannot recommend too strongly, the method of exciting uterine action by grasping, pressing, rubbing, and variously stimulating the womb from above the pubes with the ends of the fingers; an operation which gives very little pain, excites no alarm, and yet proves generally successful in these particular cases; that is, when the contraction or the disposition to contraction is regular, and there is no schirrous adhesion of the placenta. This we certainly know from much experience, and we have always been thankful to Dr. Dewees for the earnestness with which he has recommended this remedy in various writings.

We do not pretend that he was the first to use it, but simply that he was the first to recommend it to English readers, in an intelligible and authoritative manner. Since he invented and published this important method, he has discovered that M. Dasse, a writer in the *Journal des Savans, for* 1722, made some near approaches to it. This author, however, as quoted by Dr. Dewees, speaks only of compressing the womb gently with both hands, *(comprimer mollement le corps de la matrice,)* first circularly, then from the right to the left, and from the left to the right, not forgetting too, that it must be done from above downwards, and from below upwards, because the fibres intertwine and form a kind of net-work. This is the most unphysiological bagatelle that we ever read. The contraction of the fundus is the great desideratum, and therefore, the whole figure may be better compressed in the simple phrase of gently tickling this part, or rubbing it with the ends of the widely expanded fingers. It is not a little surprising that an operation so simple, so rational, so readily deduced from the known principles of uterine action, should have so long escaped the inquiring genius of obstetric writers. No other writer whom we have read, gives any idea of it; they all talk of rubbing and making pressure on the belly, but truly this is a very different thing. We must search through the medium of the abdominal parietes, until we perceive the uterus itself, and then stimulate this organ with the ends of the fingers.

The practice of rendering assistance in these cases by gently pulling at the cord, we shall venture most respectfully to reprobate, whatever authority may be produced to the contrary. If the force applied be really gentle, it will effect nothing; if it be sufficiently strong to move the placenta, it may do harm. DENMAN speaks of gently pulling in the time of a pain, and in a foot note he informs us that some animals lay hold of the cord with their teeth, in order to extract the placenta, that it is probable a woman in a state of nature would with her own hand give something like the same assistance, and that he always bore this circumstance in mind when pulling at the cord. No doubt a brute acts right, and according to its own preservative instinct this can hardly be doubted; not so a woman in a state of nature, for she is endowed with reason to improve her condition. Nor indeed can we ascertain what a wild woman might do. Mr. Ch. White draws a romantic picture of one of these daughters of nature bringing forth on an open common, and then taking a comfortable refreshing nap before even noticing her child! These speculations cannot possibly illustrate the necessities of women in civilized life. If Denman really pulled at the cord with the same force which he might very justly attribute to a brute or a wild woman, he certainly acted with great temerity, however his success might have appeared to justify the practice.

When, however, the pains have commenced, we may give them a direction downwards by passing all the fingers of one hand into the vagina and gently pressing backwards the perineum. This effect results from those known laws of sympathy from which late physiologists have derived so much important knowledge. When, too, the cake is descending, and seems to fill up the whole vagina, its progress may be expedited by inserting a finger and bringing down one edge. But notwithstanding all the above devices, we conceive it may sometimes happen that even the well-contracted uterus will refuse to act with efficacy. In such cases it has been strongly recommended by various writers to use the secale cornutum. We shall endeavour to show, a few pages forward, that it is not here an appropriate remedy, and that manual extraction is the only safe resource. If this is heterodoxy, it shall not want at least a show of justification.

The pains may prove very severe, and continue long without producing the desired effect.

This will generally be owing to irregular contraction of the womb, or to a morbid adhesion of the placenta. The hand is here to be introduced without delay, for the probability is, that it must be finally done, and the longer the operation is delayed the more painful and grievous it becomes. The variety of irregular contraction which is most common is the longitudinal, in which only the circular fibres act with vigour, grasping the elongated placenta, and embracing it equally throughout its whole length, without having any power of pushing it forward. In these cases it is generally found that the placenta adheres by a small part at the most remote corner of the uterus, and that when one end of the compressed cake reaches into the vagina, the other is far extended into the abdomen; it is plain, therefore, that the woman might grind it with the powers of ergot for an indefinite time without obtaining relief. Nor can this contraction be certainly ascertained by examination above the pubes; but we have reason to suspect it when the pains are of the grinding kind, and the placenta is found to protrude a little with every one, but to recede again as the uterine exertion ceases. We have found things in this state after having given ergot for the delivery of the placenta, but whether it caused the evil or only increased it, we could not of course determine.

We presume this variety of contraction will seldom if ever take place, unless the placenta be attached to the fundus, and we have sometimes thought that it might possibly be occasioned by our suffering the legs to remain undelivered after the body of the child was expelled; for to view the subject mechanically, it appears sufficiently plain that the feet extended in the womb till a subsequent pain comes on, might prevent the protrusion of the placenta, if not the globular contraction so very desirable. So much indeed have we been impressed with this little notion, trifling as it may appear, that we have for some time uniformly pulled away the feet with the assistance of the same pain that expelled the body, and have ever since had much less trouble with the placenta. To direct this matter properly, however, requires some address. We ought to manage so that the hips may be expelled at the onset of a pain, in which case the uterus will continue its action, and finish the labour with vigour and altogether without our extracting help. In this way we fancy the placenta has the best possible chance of being cast off, and the fundus to contract. If, however, the pain has nearly expended itself when the hips are approaching, we may resist the progress of the child, and thus stimulate the uterus to such exertion as may vigorously expel the feet and cast off the placenta. At all events we must be careful that the labour is not finished with a feeble expiring pain, nor the legs left in the womb in waiting for a subsequent effort.

So much for the longitudinal contraction, which often gives much trouble and some pain; but it is a moderate evil in comparison with the hour-glass uterus, to which we must now direct our attention. A scientific delivery of the child is supposed to prevent this as well as some other misfortunes; and a late writer presumes that it may be produced by irritating the os uteri, for the purpose of exciting the placenta-expelling pains. We cannot yield our assent to either of these propositions; irregular or spasmodic action is not thus subject to our control, either to prevent or to superinduce. It is far more probable, that when the placenta refuses to be cast off from the fundus, by the last pain that expels the child, it prevents the contraction of that part, and therefore the lower half of the womb is brought into more vigorous action to expel the cake. But all this theorising is "darkness visible," while facts afford us at least a glimmering light, which must serve for the present to direct our way. Every one must have had hour-glass uterus in cases of the very best conducted deliveries; and it is a fact, that it does not occur much more frequently, when the whole business is in the hands of midwives, the rudest and most ignorant of all obstetric rules.

This state of things cannot be ascertained by an examination above the pubes, nor by any other means with which we are acquainted, save the introduction of the hand. This position may appear erroneous to an inexperienced and superficial reasoner, who might easily fancy that the shape of the womb could be certainly ascertained through the abdominal parietes; but we can assure him that the upper chamber, as it is called, will feel like the whole womb, quite firmly, though not very closely contracted, while the lower chamber will be in the pelvis, quite out of the reach of his external examination. In such a state of things, as in the longitudinal contraction, should we be so unfortunate as to use frictions or to give ergot, the consequent pains would prove altogether unavailing, nay, worse than a total quiescence. Hence we are decidedly of opinion, that when pains have continued a sufficient time to relieve a common case of regular contraction, and yet promise no relief in the present instance, we ought to introduce the hand to explore the evil and to remedy it at the same time. If a natural contraction be found, the whole business is completed in a moment: if a more serious evil exist, the sooner it is encountered and overcome, the better.

Let no one, however, suppose that we consider this use of the hand as an operation of trifling moment; we are certainly far from acknowledging such impetuosity. It is always painful, and when delayed for two or three hours after the child is born, it is sometimes really alarming to unaccustomed and timid women; but we believe that very few would suffer more from it than from moderate labour-pains, could they be persuaded to bear it with equal fortitude. A lady whom we have attended in ten labours, has in every instance except one, either flooded or had hour-glass uterus; and she is now so accustomed to the introduction of the hand, as to consider it an affair of necessity, and she never complains. It is an easy matter for those who are so skilful as to be able to charm away all necessity for this operation, to declaim against it, and to threaten us with consequences; but we are persuaded that their rhetoric cannot be carried into practice, without the most incommodious and vexatious, if not dangerous delays. Dr. Hamilton says, that "it is perhaps not absolutely necessary in one of several hundred cases." To how many hundred this word *several* alludes, we should be glad to know. Again, he says that an "expedient so harsh and unnatural, inspires the utmost dread and horror, and not unfrequently causes deliquia or fits. It is cruel and barbarous to employ a painful mode of assistance, it is criminal to hazard the consequences of violence, when the same end may be obtained by gentler means, perhaps by waiting an hour or two extraordinary."

But the whole process of labour is painful, and sometimes outrageously distressing, even in natural cases, and we cannot believe that the manœuvre, so ardently deprecated, will increase very greatly the totality of suffering. Be this as it may, it must sometimes be done, and must be suffered, and as to Dr. Hamilton's "consequences of violence," we are happy in being able to aver that we have never seen any evil whatever to follow. Can it be possible, that to pass the lubricated hand through a way which the child has so recently passed, and to move the placenta a little, while the womb takes on a natural contraction and expels its contents—can it be possible, we inquire, that this should terrify a woman into fits, who has gone heroically through all the tortures of a painful labour? But it will be replied, that the operation is not always so quickly accomplished, as for instance, in the irregular contractions; true, but in these cases there can be no question about its propriety, and therefore, no argument can be predicated on the pain that attends them. It is a far more painful business to turn the child, but it is not *barbarous*, not *cruel;* it is an infinitely more painful matter to blister a little child in peripneumony, yet neither is this *barbarous* or *cruel;* on the contrary, these are measures imperiously dictated by a benevolent profession for the purpose of saving lives that must otherwise be lost. Hence it would appear unnecessary to lose time in so plain an argument, and we shall therefore, resolve it thus:—if the case is such as would have been relieved by time, or by the *secale cornutum*, the pain of the manual extraction, provided it be done early, is comparatively nothing; if there be a morbid adhesion, or irregular contraction, we must use the hand, let the pain be what it may, or else leave the unfortunate patient to the deadly operations of nature.

As to the time which is to be allowed for the woman to suffer these grinding pains, of which we are now treating, before we determine on manual extraction, it cannot always be the same. But if in common cases, the placenta remain one hour after the child, and the pains have had a fair trial, but yet do not promise to be effectual; that is, if they are rather of the grinding than the forcing kind, or if they have been forcing so long as to prove themselves useless, we should consider it most prudent to interfere with the hand. The longer we delay the operation, the more difficult and painful it must be, as the passage soon contracts and becomes tender; hence, when we have been pressed for time, and been fearful that the placenta might detain us, we have performed it immediately after the birth of the child, and have therefore, been able to leave the woman much sooner than we could have otherwise done. So satisfactory has been the issue of every case in which we have done this, that were it not for the weight of authority which lies against the practice, we could almost venture to recommend it to general acceptation. By this method the accoucheur ascertains at once the state of the womb as to contraction, and he can rectify any irregularity with almost mechanical certainty; if a hæmorrhage is present, or about to supervene, he is ready to meet it and prevent any improper loss of blood, instead of blindly waiting at the bedside till the woman gives notice of her condition by vomiting and fainting; when he finally removes his hand, or rather, when it is expelled together with the placenta, he knows to a certainty the state of the womb, and if external frictions are subsequently necessary, he knows they will promote a regular and salutary contraction. By this early assistance, moreover, we avail ourselves of the time when the passage is in its state of greatest dilatation, and has not yet become tender, dry, and irritable; the patient at this time is the least excitable, but becomes more so every minute; she has been suffering a greater degree of pain for some hours, and therefore the operation does not surprise her; add to this, that all the pains required by a natural expulsion are prevented, and all the fretfulness which even an hour's retention is certain to occasion; add also, the fact, that our hand does not sometimes pass fairly into the vagina, before the uterus takes on as it were, a conservative alarm, and expels the placenta; weigh all these facts with an equal mind, and consider well whether this practice, rash as it may appear, is not safer than blindly to give ergot without knowing the kind of contraction we are thereby about to produce or encourage. If it is not, we must honestly plead a non compos mentis, and throw ourselves on the mercy of the reader.

Here, we are well aware that we shall have but little countenance, and that some, who like ourselves, have yielded to this method, under the pressure of business, will be no little surprised at this open avowal of it; but every physician in the career of practice must acknowledge, that various calls which he cannot refer to another, sometimes press hardly upon him, and that he is often compelled, not for the sake of gain, but for the real interests of his people, to divide as it were, the possible quantum of his salutary labours. We have thus gone out of our way, not for the purpose of recommending an exploded practice, but merely to show that it may, and ought to be occasionally adopted; and to show also, that the manual delivery, when resorted to in time, is not so terrific a business as some writers would fain represent.

When at last, it is determined to interfere, the hand of the operator, well lubricated with oil, or melted lard *that is not salted*, should be introduced very slowly, but with a steady progress and flatwise, that is, with the thumb towards the fourchette, and the little finger to the pubes. The other hand at the same time stretches the cord, for this is of more service in directing our progress, than we could à priori believe. We should always be careful to regard the axis of the passage, as well as the long and short diameters, and therefore, the hand must make an easy half turn when it is about to pass the superior strait. But it will very often happen, when the contraction of the uterus is regular, that the hand has not reached thus far, till a pressing pain comes on, and the whole business is safely accomplished; or at most, such a case will only require that the hand should reach the further extremity of the placenta, and very gently irritate with the knuckles the already excited organ. But before we begin this operation, an assistant must be taught to support firmly, not the mere abdomen, but the very uterus itself.

If however, there be a longitudinal contraction, the case will prove more difficult, and scarcely do you reach the further part of the uterus before strong pains come on, and it requires some little fortitude, both in the patient and the practitioner, to enable the one to suffer with decency, and the other to do his duty. Let the physician, however, never yield to an importunate woman; what is not done now must be done again, when the practitioner may be unnerved, and the patient less fitted both in body and mind to encounter the pain. We knew a restive and querulous woman to prevent a timid young gentleman from doing his duty, and therefore, she retained the placenta more than twenty-four hours. It will generally happen, however, even in these longitudinal contractions, that as soon as the hand reaches the fundus, the whole organ assumes a more regular form, and both hand and placenta are quickly expelled.

The hour-glass contraction is very generally attended with flooding, but as it sometimes occurs without this evil, it will contribute most to the *lucidus ordo* of the whole, to treat of it in this place. When this is found to embrace the placenta, it is easily remedied; but when the whole cake is enclosed in the upper chamber, let the accoucheur summon all his courage, and the woman all her fortitude. So difficult is it to overcome this spasm in many cases, that some authors have recommended us to withdraw the hand and wait for the relaxing effect of a large dose of laudanum. The propriety of this method may possibly be called in question. It is difficult to decide upon a proper dose of this potent medicine; an ordinary quantity will prove utterly unavailing, and a sufficient portion for such a case it is not quite agreeable either to give or to take. We lose much time, the patient becomes irritable both in body and mind; the passage contracts and becomes tender, the hand must be withdrawn after having given much pain and effected nothing; nor are we certain that our future attempts will not renew the same spasm, even under the sedative powers of as much opium as we are willing to give. Nor will the uterus always relax spontaneously, in any thing like reasonable time. Dr. Smellie, *Collect. XXIII. Case* 3, relates that he encountered an instance of this kind, eleven hours after delivery, and yet the contraction was so strong that he at first "despaired of making further progress," and was "obliged to change hands several times, because his fingers were cramped." True, this was, as he supposed, a contraction of the whole lower part of the uterus; but the principles, both pathological and therapeutic, being the same, we have not thought necessary to make any distinctions.

We are ready to consider the retention of the placenta, beyond a single hour, as an evil that increases in a geometrical progression with every minute of time; therefore, we must acknowledge, that for ourselves, we should not withdraw the hand, till the whole business might be fairly completed. We should therefore take the cord for our guide, and bringing the fingers into a *conoid* form, should endeavour to pass them quickly into the narrow opening; we say *quickly*, for if we do not make the best use of time after our hand is now irritating the womb, the spasm will most certainly increase and close the opening so as hardly to admit a single finger. And if this should unfortunately happen, we must wait with the hand quiescent till the spasm and the alarm of the woman subside a little, when we ought to insert as many fingers as possible. If we succeed so far as to insinuate all the fingers at the first attempt, it is a very desirable point already gained.

When the hand is fairly embraced by the contraction, there will probably be some severe spasms, and here the operator must remain inactive till they subside. He must then proceed with vigour to open the passage, by spreading his fingers with his utmost power, and if he persist in his duty, he will very soon have the pleasure of finding the contraction recede so completely, that no trace of it is left; the fundus begins to act, the placenta descends, and vehement pains come on, which quickly evacuate the womb. The few cases which we have encountered of this troublesome affair, whether in our own practice or in that of the midwives, we have uniformly relieved with the painful facility above described, unless with one solitary exception, which occurred in the practice of a midwife, and which, in the progress, we shall have occasion to relate.

It will sometimes be found, that the general mass of the womb is well contracted, while there is yet a horn-like process that closely embraces an adhering corner of the placenta. This may be quickly rectified by passing the hand into this narrow part, and expanding it to the utmost stretch of the fingers. It is similar to the hour-glass uterus both in its pathology and treatment, but the contracting fibres are too near the fundus to form an upper chamber or cyst. We have sometimes felt this through the abdominal parietes, and in a few instances nature has relieved it without the introduction of the hand.

With respect to the schirro-adherent placenta, we have never met with a single case, nor with any thing similar, nor have we ever broken the placenta, or removed it unless entire, nor been obliged to leave it in the uterus, except in one case. This was attended after a midwife, and we shall have occasion to relate its interesting particulars in their proper place. It may be observed, too, that we have said nothing on the subject of separating the healthy placenta from the womb. We have never met with one single case that required this help, and as we have not proposed to write a complete essay, we shall gladly omit to speak of what we have not personally known.

On the Uses of Ergot in the above Cases.

In all the states of the uterus thus far described, we fancy that ergot can have no place. It might, indeed, be used in the regular contraction, had we any means of ascertaining when this really obtains. We are not unaware that it has been recommended for the purpose of exciting the placenta-expelling pains, and we are very certain that it has been often efficient. But when we consider the efficacy of friction in regular contraction, and the utter impropriety of ergot in the irregular; when we look to the bare possibility of doing deplorable mischief, by giving it when we know not the state of the womb, or its aptitude to this or that species of contraction; when, also, we consider the certainty with which the partial introduction of the hand will prove efficacious in the only cases to which the medicine is at all applicable, and how, in these very cases, the ergot will grind the poor sufferer before it does its part, or *fails* to do it;—we can hardly believe that for the mere delivery of the placenta, it can have any claim. Certain it is, that with our views, we can no longer give it for this purpose; and this we say without any desire to disparage a medicine which we always carry in our pocket-book, and from which we have sometimes derived the most important advantages.

In truth, we have used it, for the expulsion of the placenta so often, and found it generally so utterly useless, and so frequently to distress the woman with grinding, unavailing pains, that we feel ourselves authorized to speak with confidence. We believe that our familiarity with the longitudinal contraction, is principally owing to the use of this medicine, before we learned the wonderful efficacy of Dr. Dewees's frictions; and we recollect very clearly, how our patients writhed under the grinding operation of the misplaced article, till we were at last compelled to relieve them with the hand introduced. We then found, almost universally, a longitudinal contraction, which we now suppose was the mischievous effect of the new medicine. If it be objected, that we venture to recommend frictions in these cases, without knowing the kind of contraction that obtains, we answer, that these merely excite the natural pains, but that ergot produces such as are altogether unnatural, and sometimes inordinately violent; moreover, that the frictions can be discontinued at pleasure, but that the effects of ergot cannot be very easily subdued, nor the medicine itself removed from the stomach. In one case, we gave ten grains, as a first dose, to a woman whose pains were feeble, and in a few minutes the most furious labour came on, that we ever witnessed. The child and placenta were expelled together, nor did this event bring much relief. The pains continued without any *perceptible intermission*, and were so alarming that she took more than twelve grains of opium before we could think it prudent to leave her. From this adventure we derived an important lesson, and forthwith determined to try the method of giving the medicine in repeated doses of two or three grains, as recommended by the late Dr. GEORGE HOLCOMBE,* of New Jersey, and we are now glad to state that it is equally effectual. *Aliquisque malo fuit usus in illo.*

If it be inquired how it fell to our lot to use the ergot so frequently, we must reply, that we often used it in order to ascertain its real value and the proper mode of administering it; not because some additional power was necessary in so many cases.

The practice of others with this medicine may have been more encouraging in placenta cases:—we relate what occurred in our own hands, and what of course may occur in the hands of at least some of our brethren; and this we have done without any regard to what has been written by other observers. Nor do we say this with the slightest feeling of arrogance. We desire their authority to be respected, and only request for ourselves a patient and benevolent hearing. The utility of a new medicine can never be substantiated by the authority of a few, and therefore a long-continued interchange of opinion concerning the secale is yet wanting, notwithstanding the enthusiasm of our brethren in the eastern states. Hence we can hardly doubt but that an illustrious professor, who, twelve years ago, considered this medicine "as worthy of a trial" in the hour-glass uterus, has long ere this been convinced of his error. (James's Merriman, note, p. 212.)

SECT. II.—*Delivery of the Placenta, attended with Hæmorrhage.*

As soon as a woman is delivered of her child, we ought, without waiting to divide the cord, to put our hand on the abdomen, not merely to learn whether it be a twin case, but also to ascertain the state of the uterus as to its contraction and tonicity. If this organ be found hard, and contracted as low as the umbilicus, we may rest secure for the present, and direct our attention to the child. It is, however, very proper for an assistant to support the abdomen with her hand and arm for some time after delivery. As soon as we have cut the cord we must again examine the abdomen, and if the contraction is not satisfactory, we ought to grasp the uterus and stimulate it with the ends of the fingers. If we find it contracting under our hand we need not be solicitous concerning the event, should there be a considerable quantity of coagula, or even fluid blood expelled; for the placenta has now most probably been cast off or nearly so, the womb is contracting upon it, and a repetition of the functions at intervals will almost certainly complete the labour, or at least secure from hæmorrhage.

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* Philadelphia Journal of the Medical and Physical Sciences, Feb. 1826.

The time was that for such a case we boldly introduced the hand, and were the more ready to do this, because in our early practice we met with two dreadful cases of flooding which rendered us too sensible to the flowing of blood ever afterwards; but since we have known the efficacy of Dr. Dewees's frictions, we find it no longer necessary to resort in these mild cases to this painful expedient. In such cases, too, we generally applied a towel dipped in cold water or vinegar to the abdomen in order to prevent a return of the hæmorrhage; for this we now find a repetition of the frictions a most satisfactory substitute.

It must be plain that the above state of things can be easily remedied with but a very ordinary share of prudence and address; but even this may be suffered to run on by an incautious practitioner till the woman is brought into danger, or into such a state of debility as to impair her health, and break her whole constitution. Thus LE ROY, as quoted by BURNS, says that "we must wait with patience, because this discharge sometimes ceases spontaneously: but when the life of the woman is in danger, when the womb alternately fills and discharges, when the patient complains of dimness of sight and ringing of the ears, when her eyes are convulsed, her pulse small, the extremities cold, the face of a deadly paleness, when the blood flows over the bed, and borborymi announce the dissolution of the vitals—*then* we must employ proper means to re-endow the womb with its proper resources."

This truly is the very practice of an ignorant midwife, and is quoted by Burns merely to be reproved. Our business in parturition is not merely to save life but to preserve health, and to restore the woman if possible to her wonted vigour; and we believe that where there is no concomitant or accidental complaint requiring depletion, we shall contribute most effectually to this consummation, by preventing an excessive discharge of blood. It has been observed that females and other irregular practitioners are nearly as successful as the most learned accoucheurs, but this is a most egregious mistake, for independent of the numbers who perish under their care, and the still greater numbers whom they are obliged to refer to abler hands, it is well known that their patients do not come out of their chambers as vigorous as do those of regular practitioners. It is a very common thing for their woman to flood and faint, to revive and faint again, till nature, ready to succumb, suffers the blood to coagulate in the open vessels, and the woman escapes in a state of chronic weakness, but seldom without one or more consequent local complaints.

All this evil would often occur in the very mild case of hæmorrhage which we are now considering, were it not for the prompt interference of art, and thus the mighty blessings of obstetric science can hardly be appreciated by those who are indebted to them for their principal comfort during all their remaining life.

We shall now proceed to treat of those dangerous cases which require the prompt introduction of the hand, or which be believe are more safely managed by this than by any more dilatory method.

Here we shall suppose that the patient, whether she may have been delivered by ourselves, by the midwife, or by unassisted nature herself, is now plainly sinking under the loss of blood; the pulse scarcely perceptible, or entirely gone; the face of a death-like paleness; the eyes rolling, and almost blind; stomach rejecting its contents; head swimming; extremities cold; patient tossing and gasping for breath; blood dropping through the bed, and streaming on the floor. In such a case we have no time to trust to frictions, or to any thing short of introducing the hand in order to ascertain the real cause of this sad disaster. It is true that cold water, vinegar, or ice, ought to be applied as quickly as possible, but the hand—the hand is the first thing, and that for the following reasons:—

1. We cannot rouse the uterus to action as soon by external frictions as by touching the inside of the womb, and we must not, on account of the pain which the operation occasions, suffer another ounce of blood to be lost, as every drop is now of some importance to the support of the circulating powers. Nor does the woman in this relaxed state suffer much from the operation, or at least she does not regard it with any great concern; nay, the little pain that attends it has appeared to be useful in rousing the expiring powers.

2. We should not wait for the operation of frictions, because we do not know that the state of the uterus will admit of them. The contraction, or aptitude to contraction, may be irregular, and if so,

we shall find it most easily remedied in this state of the system; and moreover, though we might in such a case arrest the hæmorrhage by frictions, yet they are not applicable, because we thereby increase an evil, for which we must finally introduce the hand, at a time too when the morbid contraction will be harder to overcome.

3. There may be an internal hæmorrhage which prevents the contraction, and will continue to prevent it, until we remove some of the resisting contents of the womb. Every one knows that a strong pain in these cases will sometimes expel a great quantity of coagula with fluid blood, and the woman appear to revive; but ere many minutes, her pale face and sinking pulse will indicate the mischief which is still going on within.

4. The introduction of the hand does not prevent our using the frictions at the same time if necessary; nay, it is often very proper to apply one hand to the uterus externally, while the other is operating within, and particularly when we have overcome the hour-glass contraction, the external hand is infinitely useful in stimulating the fundus to contract and propel its contents.

It may be a question whether we ought to operate thus when absolute syncope or apparent death has supervened. To this we could hardly venture to return an answer, as we have never seen so dreadful a case. Dr. Dewees relates one in the Philad. Journ. Vol. VI. p. 76, in which he succeeded by frictions alone. On the contrary, Dr. Gooch, a very good, but not an equal authority, resorts to the operation forthwith. It will sometimes happen, that weight of character will not carry its wonted influence in every point, and therefore we seriously believe, that upon the reasoning we have already used, we should proceed at once to the ultimate investigation. We should then, with the hand in the uterus, be ready to do whatever could be done in the worst cases, and that too in the most prompt and vigorous manner. It is true that Dr. Denman has known some lives to be lost by this apparent rashness when the woman was so far reduced. But why it should of itself be dangerous to life, or why it should not prove more dangerous after the woman has revived a little, and then flooded further, we are at a loss to conceive. We shall therefore proceed with our essay on the principle, that in every alarming case of hæmorrhage, the hand is to be introduced for the purpose of arresting the discharge by the shortest method, and of being prepared to meet any untoward state of things whatever; for we have it then in our power, as we have already said, to rectify any unfavourable state of the womb with almost mechanical certainty.

The most alarming of all these hæmorrhagies takes place when the same pain that expelled the child has cast off the placenta, without, at the same time, contracting the womb. Among other causes of this, we presume it might happen in the hands of ignorant practitioners, when the cord passes two or three times round the child's neck. If this be true, it shows the great importance of passing the hand to the neck the moment the head is born, in order to be ready if the cord be there, to slip it over the shoulders as they advance. This little manœuvre has lately been ushered into the world at Edinburgh, but American physicians have long practised it. In the present case, the uncompressed mouths of the bleeding vessels will pour out blood with fatal rapidity, and the woman may sink into the utmost danger in a very few minutes, and almost before an inconsiderate or tardy practitioner would have time to take the alarm. The mere possibility of this, shows the immense importance of applying the hand to the abdomen the moment the child is born, in order to ascertain what degree of tonic contraction may have taken place. For if in such a case the patient's face is not seen, nor the pulse nor uterus attended to, the first notice the practitioner may have of the deplorable mischief he has permitted, will reach his ears in these ominous words—"I'm sick, I shall faint."

Let the accoucheur apply quickly to the abdomen, and if the uterus do not soon contract under his fingers, let him introduce the hand. At the same moment the windows must be thrown open, the fire extinguished, cold water sprinkled in her face, and applied freely to the abdomen, a messenger dispatched for ice. The ergot, which ought always to be in the pocket of every practitioner, must now be prepared for exhibition, if necessary. If the uterus is plainly not disposed to contract firmly, the hand may be withdrawn a little into the vagina, and a smooth long piece of ice, or a sponge saturated with vinegar, may be received into the palm, and conveyed to the fundus. The other hand must then be applied to the abdomen, and occupied with external friction. If the woman be still faint, it is high time to administer a little brandy in cold water, and this must sometimes be given very often, and even in considerable quantities. We have read of cold water being poured on the abdomen from a height, but this must prove a hateful expedient to modest women, and we hope not often necessary. Of all the remedies, however, we presume that ice, when carried fairly into the womb, is the most decisive. We have used it frequently, and never did any perceptible evil result from the practice; while at the same time we presume to have saved two or three valuable lives by it.

The degree of cold that is applicable to individual cases, will of course depend upon the judgment of the accoucheur, which must be based on a rigorous consideration of the local affection and of the general system. We can well remember having applied too much cold in our early practice, and thereby given ourselves much anxiety, and the patient no little distress; and we can even now call up the image of a woman, whose pale face was rendered still paler, by the unnecessary use of a second or third piece of ice. It is said that cowards fight with the greatest vehemence when pressed with danger, and thus it is that a young practitioner may be induced to act with fatal vigour, and to rush with valour where prudence only was necessary. Sir RICHARD BLACKMORE complimented CHAPMAN thus—if you had used less cold, this woman would have died of hæmorrhage; and if you had continued it longer, you would have extinguished life. This, says Denman, showed great accuracy of distinction; but we humbly believe that such accuracy is not often necessary, nor the straits of Scylla and Charybdis so very narrow. The womb, we presume, can be made to contract firmly, without running any risk of destroying the patient with cold.

If then the uterus be contracted so as plainly to have suppressed the hæmorrhage, it is time to give her hot water in her brandy, and even to apply warm bricks to her feet. The propriety of further stimulus will however be decided upon by considering the degree of exhaustion—it may or it may not be necessary. To determine upon the application of warmth would prove a perilous task, did we not know to a certainty that it is no longer dangerous when the uterus is fairly contracted.

LEAKE relates a case of hæmorrhage after parturition, in which he restrained the flow by means of cold. "In about twenty minutes the patient became sensible, and in a voice scarcely to be understood, desired she might be covered, for she was dying; as she was very cold, and was in a kind of shivering fit, I complied with her request, but soon found my error in so doing; for when she became warm the flooding returned, which obliged me to have recourse to my former method." This return of the hæmorrhage would not have happened, had frictions been applied to the womb, and therefore we have no such reason to dread the application of heat. Indeed it often happens that nature would sink rapidly, even after the hæmorrhage is entirely suppressed, did we not administer warmth and stimuli for many hours, and thus "obstinately fight with death." In the worst cases the legs are cold, there is no pulse at the wrist, and frequent vomiting and fainting might possibly relax the womb, and pour out the last ounce of circulating blood upon which life subsists. We must therefore determine to forget all other business, till we find the patient with a steady pulse and a quiet stomach, let the time be however great.

We now suppose that the hæmorrhage is checked and the womb contracted, but that the patient is in danger of sinking—partly from exhaustion, and partly from the irregular action of the arterial and nervous systems. The indications are, therefore, 1st, to quiet the stomach, without which nothing can now be done; 2d, to quiet and equalise the excitement; 3d, to support the strength; 4th, to preserve the circulation unimpaired in the extremities.

Thus far we suppose the woman has taken nothing but brandy and water, a very acceptable article to the stomach in the present cases; it must now be continued, but given warm and sometimes hot. A warm sinapism ought to be applied to the epigastric region, and some food, which we hope has already been prepared, ought to be given in small, frequent portions. Chicken broth, well seasoned, we believe is far the best; but if this be wanting, the arrow root jelly is a good substitute, and may be prepared in a few minutes. To vomit once or twice, however, is not considered as certainly unfavourable, as it seems to relieve the oppressed stomach, and give a spur to the powers of life; but it is an evidence of a bad state of the system, and therefore never to be desired. If the patient is the worse for it, and fainting succeeds, the case is very unmanageable and always dangerous, unless in some constitutions peculiarly liable to syncope. To quiet the stomach some authors would give large repeated doses of opium, and Burns says they are the very best cordials we can employ. He says, that when the debility is great, he would give a hundred drops of laudanum, or five grains of the gum at once, and afterwards three grains every three hours, till the patient might be out of danger. To us, this is a most incomprehensible practice, and we are rather inclined to think with Denman, that opium cannot be given very freely when the patient is reduced to a state of great weakness.

But to answer our second indication, that of quieting and equalising the excitement, nothing has ever been known that could take its place. We prefer the form of paregoric elixir, as this acts more quickly than the medicine in powder, and withal, it is one of our very best anti-emetics. Two drachms may be mixed with a little sweetened hot water for one draught, and this may be repeated several times within an hour, if necessary. The tranquillising effects of opium after labour, are often desirable, as in those severe rigors which sometimes suddenly follow delivery, and in that irregular action of the heart, from which Burns has "known many instances of sudden death." To quiet and equalise the excitement, then, we believe to be the principal use of the medicine; but it may be further beneficial by determining to the pores, and thus throwing off the effects of cold, to which the woman has been so recently exposed.

To support or rather to increase the strength, which is our third indication, we must continue to give broth, beef tea, arrow-root, sago, with small portions of hot diluted brandy, taking infinite care not to overload the stomach. We must observe as much as possible a homogeneity through the various articles of food and drink, as an incongruous farrago will not lie on the stomach; at the same time, however, it is necessary to pay some regard to the patient's known habits and prejudices. Nor let it be supposed that by this continual stimulation we are in any danger of renewing the discharge, provided the contraction of the womb be faithfully attended to, and frictions used if necessary. A tonic state of the whole system is of wonderful efficacy in many hæmorrhagies, and not likely to be detrimental in this, so far at least as we are able to procure it.

To fulfil our fourth indication, which is to promote the circulation in the extreme vessels, we must be careful to support the vital warmth all over the body, but particularly in the lower extremities. After a bad hæmorrhage has been suppressed, the patient always lies in a wet and most uncomfortable condition, and this must now be remedied as far as possible by putting warmed blankets around her, but as soon as the pulse becomes steady, and the countenance brighter, she may be gently rolled over on the other side, or on her back; she must make no exertion herself, nor is her head or shoulders to be elevated one single inch. Some of these patients may live in a recumbent posture who would instantly faint and die if raised. Denman says that "for want of attention to this matter, sudden death has sometimes happened when we were not suspicious of danger." When, therefore, the accoucheur leaves his patient he ought to have some trusty woman who may prevent all officiousness on the part of others, for even some of the wiser females are very little to be trusted in this matter. Two hours after the delivery of a weakly patient, who had *not* flooded, we left the room in order that she might be made more comfortable, but at the same time gave strict orders that her head should not be raised. After being kept out longer than we could feel satisfied to remain, we were hastily called, and no little astonished to find the woman well covered up in a fresh bed, and in a state of alarming exhaustion. The uterus was contracted, there had been no flooding, and therefore a little food and wine very quickly revived her. The next day she told me that she had stood on the floor leaning on her maid, while the good woman made a fresh bed!

Mr. Burns tells us that a flooding excites the greatest consternation among the attendants; this is quite contrary to our experience, as we have found it difficult to impress the female attendants with a due sense of the danger, without at the same time alarming the woman. It is often vexatious to witness with what indifference these people will regard a hæmorrhage, and how they will stand idly gaping and suggesting a little hartshorn, instead of quickly bringing in ice, or extinguishing the fire. Amidst the pressure, therefore, of the foregoing various desiderata the accoucheur must be decisive and even authoritative, particularly if he happen to be among strangers who will sometimes presume to have judgment of their own, and are therefore not very ready to attend his calls. Let him, however, do his duty, and the time will come when the females of his neighbourhood will learn theirs, and obey with alacrity.

In these cases we must not be in haste to leave our patient, as the uterus may possibly relax and pour out blood, when the loss of a few ounces would prove almost certainly fatal. Dr. Dewees has instructed intelligent females to rub the womb into action in his absence, and thus he has sometimes felt satisfied to leave his patient the sooner. The doctor also gives sugar of lead, with opium, as an additional safety, with directions to repeat the dose in his absence. We shall most respectfully suggest that small doses of ergot, three grains every quarter of an hour, might prove useful by imparting tone to the womb. Even in cases wherein there had been no improper discharge, if the womb did not contract firmly, nor after-pains supervene, we have directed it to be thus given, in order that we might leave the patient with more satisfaction.

We read in the Med. Record. IX. p. 486, that Professor Ives, of Yale College, carries alum into the uterus in cases of hæmorrhage. A piece of suitable size is cut into a prolate spheroid and secured by a tape. "This should be moved by the hand around to all sides of the organ, till it has passed over the whole or nearly the whole of the inner surface. The hand is then withdrawn and the alum is left behind." How is it possible that the professor and his friends could overlook the effects of irritation? Surely the alum would not very suddenly dissolve, and therefore it would act precisely as do the knuckles. If it be suggested, that being left in the womb it may gradually dissolve and constringe as well as stimulate to contraction, and that it may thus be useful in what has been unfortunately called menorrhagia lochialis, we could not object to the experiment: we would humbly suggest, however, that the decorticated lemon, recommended by M. Evrat, promises to be more useful.

As to the tampon, the balls of hemp used by a foreign writer, and Denman's practice of leaving the placenta for three or four hours in the vagina, we must pass them by as altogether inadmissible in the practice of those who would prefer an open to a concealed hæmorrhage, or a firm contraction to these deceptious occlusions.

Hour-glass Uterus with Hæmorrhage.

When, upon introducing the hand, we find this state of things, we must proceed forthwith to overcome the contraction in the manner already described, nor do we know that any peculiarity of treatment obtains here which may not be derived from the preceding pages. We have only met with three such cases attended with flooding; one of these was in a lady remarkably subject to hæmorrhage, to whom we had therefore given a dose of ergot a few minutes before delivery. The pains were very pressing, and the labour was finished to our entire satisfaction; but very quickly a frightful hæmorrhage took place, and, upon introducing the hand, an hour-glass contraction was formed, which shut up the whole placenta in the upper chamber, the blood streaming through the narrow passage. The pains were very severe, scarcely intermitting for a moment; and, not without sad forbodings, we proceeded to overcome the spasm, now rendered ten times worse by the ergot. In two or three minutes, however, during which we used all the manual force we were capable of exerting, the stricture was overcome and the fundus contracted so successfully that the whole womb immediately assumed its proper shape and expelled both hand and placenta. Never did one of my patients get up better than she, notwithstanding the first alarming loss of blood. Here there was flooding with severe after-pain, and from the state of the parts, frictions would not have been useful, had the pain subsided. Nor would they have been more salutary in the following case, which we are certain must prove worthy of recital.

A Mrs. T. two miles from this town, was delivered, after three or four days preparatory pains, before any help could reach her. When we arrived, the midwife was busy at the cord, and a most alarming hæmorrhage was then at its height. We quickly introduced the hand and were met by an hour-glass contraction, which closely embraced the cord, and shut up the whole placenta, of course, in the upper chamber. As the external hæmorrhage now ceased and the woman began to revive, we withdrew our hand, and ordered cold water to the abdomen. We were obliged to retire from the room, for a few minutes, and upon our return, the patient was still reviving. She then took a large dose of laudanum, the quantity not now recollected, and we sat down to wait and act according to circumstances. After some time we determined to effect the delivery, but upon searching for the cord to direct our hand, we were astonished to find that it was gone. The attendants were all strangers to us, and at least two of the three were excessively bad women—*fures scorta, mendaces*—so that they all most resolutely denied having touched the cord. We introduced the hand, but neither placenta nor cord was found, nor could our fingers discover any passage into the upper chamber. But the left hand applied to the abdomen, while the right was in the uterus, ascertained very plainly that there was an upper chamber, though not the least opening to it could be found. We knew almost to an inch where the cord had passed, but all here was a solid, impenetrable substance. So that had it not been, that we examined with one hand in the womb and the other to the fundus, externally, at the same time, we should have presumed that the midwife had pulled away the placenta in our absence, and that the uterus was laudably contracted.

We gave more laudanum, and waited longer, but upon a second trial no opening could be found; and the woman having become fretful, irritable, feverish, and withal, having abused our patience, by obstinately denying that any one had touched the cord in our absence, we determined *de more majorum*, to abandon this part of the business to nature. The weather was excessively hot, the next day a field meeting was held near the house, the women all flocked to inquire concerning this novelty; she had frequent rigors the same day, followed by severe abdominal inflammation, the placenta came away putrid on the third day, and she died in the evening. We were not well at the time, and therefore, unwilling to encounter a post obit examination. The midwife always persisted in denying that she touched the cord, and it never occurred to us till this very moment, that in all probability, the woman herself tore it away.

When we first reached this patient, we were too much broken down, to encounter the contraction without some rest and refreshment; this circumstance threw the cord into the hands of some one whose mischievous interference brought on all the subsequent evil.

Apparent Anomalies.

It must have been observed by every practitioner, that an apparently well-contracted uterus, will sometimes pour out too much blood; and on the contrary, that when the contraction is far from perfect, and this organ even relaxed, the occlusion of the vessels is yet complete.

These facts constitute no real exception to the general rule, as they must depend upon some collateral circumstances, independent of contraction. The woman who floods a little, with a well-contracted womb, may be of a hæmorrhagic temperament, the circulation may be too much excited, there may be some accidental disease in the placental attachment, or a piece of the cake may possibly be left unseparated, without the practitioner's knowledge. All these circumstances show how variously we must be on our guard, and that it is not always enough, merely to know that the organ is laudably contracted, but that we ought also to know, whether there is too much waste.

When on the other hand, the unsubjected uterus does not flood, the reason of this anomaly may be, that the irritability and consequent tonic state of the arterial system is so great, as to shut up the vessels and permit the formation of coagula. We have in a few instances found the womb surprisingly large, but as it was firm, and without discharge, we have been satisfied to leave the woman. In the next place, if the large, and lax womb do not flood, the vessels may be so small and few, as to admit the easy formation of occluding coagula, or the placenta may be unusually small. We have sometimes found it difficult to compel the uterus to contract, or rather, to remain contracted, and have sat for an hour in applying frictions occasionally, and yet there was no improper discharge.

Many useful observations on this subject, may be found in Dr. Gooch's excellent tract, first published in the Med. Chir. Trans. Vol. XII. entitled "Circumstances in which a uterine hæmorrhage may occur, though the uterus feels contracted in the ordinary degree." An analysis of this useful paper may be found in the Journ. of Foreign Med. Science, for 1823.

SECT. III.—*Observations on Transfusion.*

Notwithstanding all the antihæmorrhagic resources of the obstetric art, it does sometimes happen that patients expire in the very midst of flooding, and that some who barely escape this hideous catastrophe, will yet sink in a few hours, from mere inanition. But even here, where all former resources failed, where the pulse is not felt at the wrist, the patient is the picture of death, a cold sweat covers the body, the woman blind, deaf, speechless; in fact, when she is in a dying state—even in this deplorable condition the resources of modern art are not altogether wanting, nor are they always ineffectual. Transfusion of blood, which having been applied to some ridiculous and impracticable purposes, had sunk into such contemptuous neglect, that even the genius of Darwin could not revive it, has lately been applied to its proper object, and several females are supposed to have been saved by it from impending death.

In the year 1817, Dr. James Blundell, of London, was called to a woman who was fast sinking under uterine hæmorrhage, and though the discharge had ceased before he reached her, and every exertion was afterwards made, she died in two hours. Upon reflecting on this melancholy scene, he fancied that the vessels might have been replenished, and the woman saved. He therefore, immediately instituted a suite of experiments on dogs, by which he demonstrated in a very satisfactory manner the following points, which we have condensed from his invaluable paper.

1. That these animals may be bled to a state of "profound fainting, marked by stoppage of the circulation, by insensibility, and by a complete relaxation of the abdominal muscles," and yet be restored to life and health, by injecting into their veins a few ounces of blood. "To give this experiment all its force, it may be proper to observe that the combination of symptoms just enumerated, is mortal, and that the dog invariably dies when left to its natural resources, if the blood is suffered as in this instance, to flow from the femoral tube until the discharge spontaneously ceases."

2. That dogs which are bled into this state may be quickly revived by injecting human blood, but that they afterwards sicken and die.

3. That venous blood of dogs may be injected into the arteries of the same animal with complete success.

4. That in a small dog a pint of blood may be made to pass through the syringe in a short time from the carotid artery, to the external jugular vein, without any final detriment to the animal.

5. That three drachms of air from the lungs may be injected into the femoral vessels of a small dog, without much temporary, and without any lasting injury.

6. That five drachms of atmospheric air may be injected into the femoral vessels of a small dog, and yet the animal recover, with some transient restlessness, vomiting, and tremor.

7. That dogs' blood which has stood thirty seconds before it is injected is unfit for resuscitation.

8. That man's blood coagulates much less rapidly than the dog's, and that transfusion is therefore much more plausible in the human than the canine subject.

The above are the principal points established by Dr. Blundell, in his truly philosophical essay, first published in the Med. Ch. Trans. Vol. IX. and republished in the Eclect. Rep. Vol. IX. p. 145. It is altogether foreign to our present purpose to give any account of what had been done by previous physiologists—our business is with Dr. B. and his own peculiar use of the forgotten experiment. He first performed it in September, 1818, in Guy's Hospital, on a patient who was fast sinking of inanition, from schirrus of the pylorus. The poor man's condition was altogether desperate in the opinion, both of the doctor and other physicians of eminence who witnessed the operation. About fourteen ounces of blood were injected in the space of forty minutes, without exciting any commotion in his system. After a few hours "the patient experienced a change for the better; his body became warmer, his respiration remained regular, and his pulse, which, by this time, had acquired nearly double its former size, beat with great regularity about eighty-eight times a minute, which was its number before the operation was performed." His lips and face acquired a better colour; he stirred his limbs with more vigour, and upon being asked, as to his feelings, he replied—"I am better, much better, less fainty." About thirty hours after the operation he began to relapse into his previous debility, and about the fifty-sixth hour he died. Nothing extraordinary occurred, all his symptoms, after the reviving effects of transfusion passed away, were the same as might have been expected, had the operation not been performed.

The event of transfusion in this case, was highly encouraging, as not one bad symptom followed; and we cannot but regret that it was not repeated, as soon as the good effects began to subside. Dr. B.'s history of this case was published in the Med. Chir. Trans. Vol. X. and republished in the Eclect. Rep. for 1820. We do not know that the operation was tried again till the case of Mrs. Waller occurred, as related by the doctor in his lectures, and subsequently in the Philad. Jour. for Nov. 1825, and more correctly in the same work, for May, 1826. In this case two ounces were injected without any apparent effect, but upon throwing in two more, there were some tendency to syncope, and some effort at vomiting; but these efforts were very transient; the patient evidently revived under the operation, and recovered without one bad symptom. Here was one grand point gained—the practicability of the operation, without injury to the woman was fairly established, at least in one case. But this was not all—the enlightened attendants had reason to believe that it saved the patient's life.

Since that time transfusion has been performed in ten or twelve cases, the reports of which have reached this country, and all the patients recovered. If any unsuccessful cases have been reported, we do not recollect them, or have not received the information. We are informed, however, in the Philadelphia Journal, Vol. IX. p. 207, that Dr. PHYSICK performed the operation thirty years before, "under precisely similar circumstances;" but whether with success we are not told, nor do we know that the particulars were ever published. It has not been performed on the human subject by any other person in America, or at least we have no cases reported.

Here there is one of the noblest operations that ever was offered to the patronage of the medical profession, an operation which promises to rescue many females who are ready to perish in the most anxious, the most interesting, the most heart-rending situation to which they are ever brought. But a question arises—does it come to us so plausible in itself, or so authoritatively recommended, as to command our respect and acquiescence? To answer this question, we must consider in *the first place* the reason of the thing itself, and *secondly*, the credibility and judgment of the reporters.

When an animal is seen to bleed till it faints and finally dies, what would most probably be the prompt reflections of an unlearned man, but that if the vessels could be replenished with healthy blood, the functions of life would again be resumed? To this very natural presumption of the ignorant, the physiologist could hardly invent an objection, unless that the blood might be deteriorated in its passage, the body disorganized by the concussions of approaching death, or that a commixture of alien fluids might in some unintelligible way be incompatible with life. That none of these objections are valid is now shown by many experiments which are as incontestible as the fact of existence itself. For when an animal is bled till he will bleed no more, and is now certainly in that dying state from which unassisted nature is never known to rise, and yet is restored to healthy life by merely injecting a little blood, surely no one can call in question the real cause of his resuscitation. To doubt such a thing when candidly presented, is really to condemn the use of our senses, and to dispute like the good Bishop BERKELEY, the material existence of every thing. Provided, therefore, we credit the reporters, and depend on their judgment of the cases, all reasoning, either direct or collateral, is now useless, though we are well aware that much ink might be unprofitably shed in this way.

Let us then advert in the *second place* to the credibility and judgment of the witnesses. That they believed their dogs and their women dying, and some of them almost dead, there can be no doubt in the mind of any one, as authorities to this point are positive and altogether incontrovertible; for if we do not credit them we must give up medical testimony as good for nothing, and revive in our science, the school of PYRRHO. Their judgment, then, concerning the moribund symptoms is all that will admit of doubt, and the last question therefore arises, was it possible for their patients to have revived under the common treatment, independent of transfusion, and that all these men, with Dr. Blundell at their head, can have been amusing us with idle experiments, which a few years more will consign to merited neglect.

This question will, no doubt, be the occasion of much honest controversy in the minds of many inquisitive physiologists, and particularly in America, where it is known that accidents in parturition are far less common than in England. But medical language is now so certain and easily understood by those who are accustomed to read it at the bedside and in the faces of the sick, that we hardly know any means of rejecting their testimony, unless we suppose that an enthusiastic philanthropy perverted their senses. This has always been a ready inlet to deception, and so many well-attested and apparently successful projects for the relief of human suffering have fallen sacrifices to further experience, that we presume very many of the profession will yet demand numerous successful trials, ere they yield their assent to the possibility of this great triumph of modern science, as it were over destiny itself.

For our own part, we hailed it as a fact indisputable; and yielded a willing credence to a possibility which seemed so natural, so reasonable, so consonant with the experiments of the older physiologists, that we felt principally surprised it had not been verified long before, and brought into use. Nor has our faith been entirely shaken by some plausible objections which have been lately propounded, and which we now propose to examine with the freedom that philosophy permits, but not without the respect which is due to authority.

The first objection offered, that puerperal patients bear excessive losses of blood and yet recover, is, we presume, completely nullified by the fact that women have died of hæmorrhage in the most respectable hands. We must not suppose that a man's brains cannot be beaten out, because men have been sometimes outrageously banged on the head without detriment. The argument is not now, whether this moribund state could have been prevented, for it may exist in all its horrors, before efficient preventative help can arrive; but rather, whether it can be remedied by the means proposed, in cases which were mortal under all former treatment. It must surely be plain to every understanding, that the body may be drained of its blood so far, as that the circulation can no longer exist in such vigour as to prevent congestions, and that in this case death will creep on slowly, and may be many hours in completing his work. We may stimulate as we please, but if the material upon which the heart acted is gone, our stimulation will be vain. On this point, at least, the position of LUCRETIUS, that nothing can act and react but matter, is verified: —*Tangere enim et tangi, nisi corpus, nulla potest res.* There is no spirit or principle which can here perform the functions of blood.

It is true that a very small portion of *circulating* blood will maintain the heart's action, and this fact we shall find to be one of the strongest arguments in favour of transfusion; but this small part may be rendered still smaller, and life be so far reduced that many casual circumstances, to which every woman in this state of exhaustion is liable, may quickly cut her remaining thread. Because a woman is still alive when the hæmorrhage is suppressed, is not a sufficient reason that she must continue to live. The power of steady, uninterrupted resuscitation may be gone, and life may be lost by many little casualties against which we cannot provide, as a sudden, uncontrollable restlessness, some wanton exertion, some inconsiderate advice of her officious friends, a profuse discharge from the bowels; or the nervous and cerebral systems may become disordered, and local debilities may determine to local and deadly congestions.

For ourselves, we never lost a woman of hæmorrhage, or its consequences, but we were called two years ago to the assistance of a midwife, under circumstances which possibly might have been remedied by transfusion. A Mrs. H. near this town had twins, and flooded most frightfully before we were called; the attending women thought her at one time totally dead, but when we reached the house, she had revived a little and was able to speak. We introduced the hand immediately and found the flooding stopped, but the whole placenta was shut up in the upper cyst of an hour-glass uterus. The stricture was soon overcome, and by manœuvring a little with one hand in the uterus, and the other applied to the fundus externally, a sufficient contraction was very gradually obtained, and we removed the placenta without waiting for active pains. This was done lest so large a body should prevent all further contraction in the present atonic state of the womb and of the whole system. Ice was then carried into the uterus and frictions applied, by which means a firm contraction was obtained. The various necessary stimulation was already in use, and it was now continued with every possible care, but we never could procure a steady pulse, or life in the countenance. The second day a diarrhœa came on without any evident cause, and sunk her very quickly below the reach of all ordinary means. We believe this woman died of pure inanition, and without any disease whatever; but when the post obit examination, so interesting in this case, was requested, the poor husband exclaimed—not for the whole world.

The following case is not dissimilar, with respect to the proposed operation. About eight years ago, a Mrs. S. of Northumberland, flooded very largely under the care of a midwife, and two days afterwards was seized with diarrhœa, as they all said, without any assignable cause. When she was without a pulse at the wrist, and utterly below the power of medicine, we were called for the first time. We have often thought that these two women might have been saved by transfusion after the diarrhœa had supervened, or at least, that in such cases, the operation ought to be tried; and yet it is plain, that had they recovered, their disease would have been called simple diarrhœa and the cure have been imputed to other means. Thus it is, that we are often unable to apportion to each therapeutic agent its proper part, and are therefore obliged to embrace very many in one grand indication.

These two women, and the Mrs. T. formerly mentioned, are the only patients we ever lost in childbed from the consequences of labour, and as they were the patients of midwives till their doom was sealed, they of course come under the "*quæ non fecimus ipsi.*" Like CHATHAM in the Spanish war, we are not answerable for measures we did not guide.*

It has also been objected that the transmitted blood does not appear to be sufficient in quantity to prevent death. This position can only be refuted by experiments, though some little reasoning may be urged against it. We must remember that all the blood is not drained from the body, nay, that only a small portion of it is gone; we must remember, too, that there is a certain *minimum* of circulating blood, which is barely sufficient to support the heart's action; hence it happens, that between the least possible quantity upon which this action will subsist, and the greatest possible quantity upon which it will not subsist, there may scarcely be an ounce of difference. This we presume is one of the most powerful arguments in favour of transfusion, as it shows clearly that much alien blood is not wanted, and that hence all the commotions which might, à priori, be expected to arise from a free commixture, may be avoided.

It has been objected in the third place, that the foreign blood does not promote the tonic contraction of the uterus, without which nothing can be available. To this may be returned the ready answer, that it is not used for this purpose. The uterus is now supposed to be contracted, and the arteries must certainly in this exhausted state be plugged to a sufficient degree. We shall not aver that it cannot relax and flood after transfusion, but we may surely presume that if the system revive, the frictions or ice will control this evil. But we are somewhat at variance with the objectors even on this point, and cannot but hope that transfusion may increase the capacity of tonic contraction in the uterus, by restoring tone to the exhausted body. Women do not often die of an actually existing hæmorrhage, but of the consequences of one which has been some hours restrained; nor can we believe there is the least danger of the discharge returning, provided the necessary care be extended. The circulation is feeble, the patient cold, the uterus contracted to such a degree that its arteries must be filled with coagula which the returning circulation will hardly remove.

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* We lost five women of a malignant puerperal fever, which prevailed here in the year 1817; but they had very favourable labours, and sunk under a disease, the treatment of which we did not at first understand. Eclect. Repert. Vol. VIII. 202.

A fourth objection has been brought, that an accoucheur and physician of great experience has never met with a case wherein the dormant powers of the uterus could not be excited in time to arrest the hæmorrhage. But to this we may reply, that such cases may occur in the hands of others who are not endowed with his practical acumen; and that to these unfortunate cases he may be called too late to secure the patient by common means, and may then find it obligatory upon him to resort to transfusion. It is always right to be prepared for the worst possible state of things, and if the Doctor were called to a patient who was evidently gasping her last, with death in her visage, and yet not quite so far exhausted as Dr. Blundell's dogs, it is presumed that he would feel himself bound to perform any operation which has been said, on good authority, to have been successful, or at least evidently useful, in so many similar cases. The Doctor has never lost a patient from flooding, but at the same time he knows that others have lost more than one; and that many cases of hæmorrhage, particularly before delivery, may occur in the hands of some who are not as capable of affording the desired relief, as a metropolitan practitioner of eminent genius and long experience, but who may yet be able to make some amends to their unfortunate patients, by replacing the blood which they could not restrain. For ourselves, we have never in our own practice, lost a woman of hæmorrhage or its consequences, but a certain melancholy foreboding hangs over us, that we sometime may, and we hope to be prepared to render the unfortunate subject of it this ultimate service—"*felix, faustum, fortunatumque sit.*" It certainly appears to us more encouraging in its aspect than to inflate a man's lungs who has been dead in the water for half an hour; and yet the humane society would brand a physician with infamy, were he to consign such a subject to the grave, without a vigorous attempt at resuscitation.

The experience of all time has shown that women may continue for several hours in such a state of exhaustion, as not to be recovered by any other known means; if therefore, transfusion give any hope of success, it surely ought to be universally tried. Were it even useless, but at the same time harmless, it ought not to be despised; for the time may come when we shall learn the real purposes to which it is destined. If after an improving experience of twenty years, it be *then* found to serve only one desperate case in five, it will still do the highest honour to the original projector, and fairly rank him among the most distinguished medical benefactors of the human race. We must not forget that it is a novelty to the present generation, not yet brought to its ultimate perfection, and therefore, we ought to be surprised that it has not destroyed, rather than saved so many lives. The Peruvian bark was the destruction of thousands, for the first century after it was known in Europe; but so far from transfusion being a dangerous experiment, it appears to have done no harm in one single case of all that have been reported. If it be said that the woman might have recovered without it, and that the quantity of transfused blood was not sufficient to turn the wavering balance, yet it may be averred on good medical testimony, that it was, to say the very least of it, a conspicuous coadjuvant in their restoration, as they always very evidently revived upon receiving the foreign fluid. From this fact, it might be inferred that women who barely escape death from hæmorrhage, and are then destined to drag on a miserable existence for several weeks, might have their convalescence greatly promoted by transfusion; nay more, that patients who have been reduced by hæmorrhage from any other cause, as wounds of arteries, or rupture of vessels in low fevers, may find it a useful auxiliary, and thus verify the anticipations of Darwin: "Try all things, hold fast that which is good."

[Note.—Several of the most prominent practical doctrines, inculcated in the preceding essay, are in direct opposition to those, which the reasoning and experience of the editors have led them to entertain. As they do not, however, hold their opinions to be the certain measure of what is right; and believing, that a candid and free interchange of views, and observations, is always conducive to the advancement of medical science, they very cheerfully give it an insertion. The talents, and extensive attainments of the writer, moreover, entitle his opinions to a respectful consideration.—Eds.]

Art. VII. *Case of a Scrotal and Anomalous Tumour, successfully extirpated.* By Dr. Edward W. Wells, Physician and Surgeon in Maracaybo, Colombia. [Communicated by Felix Pascalis, M. D. of New York.]

THE yaws is a common disease in many of the interior districts of Colombia, and from the want of proper assistance, from injudicious modes of treatment, and a neglect of cleanliness, occasionally puts on varied and aggravated forms, entailing upon its victim anomalous and incurable diseases. The following appears to have been a sequela of this disease.

Carmilo Ballestero, a well made light coloured negro, under thirty years of age, married, a labourer on a plantation at San Pedro, a settlement on the west bank of the lake of Maracaybo, and about sixty miles from the city of that name, was affected with the yaws about three years ago. He was treated by decoctions of sarsaparilla, and some other popular remedies, but at the time of the ulcers commencing to heal, he perceived a thickening and hardness of the skin at the lower part of the scrotum, which gradually extended and increased, resisting every remedy that he had devised and applied. This affection was unattended with any pain, or sense of uneasiness, except that occasioned by its bulk and weight. His general health had remained unimpaired, nor did he suffer any other malady than a scaly eruption of the lower extremities, which might be attributed in some measure to want of cleanliness, as he was under the apprehension that the application of water to his skin would be attended with dangerous consequences. His virile powers had gradually diminished as the bulk of the tumour increased. When he applied to me, the weight and size of the affected part entirely prevented any exertion, and made the act of walking very difficult. The tumour measured from the symphysis pubis to its base, twenty inches, and in circumference thirty-six; its surface presented the same knotty, rough, and scaly appearance as is seen in the legs of those affected with elephantiasis; but near the upper part the skin had a more natural character, and seemed to be merely extended by the weight of the portion below. The veins of the scrotum were varicose. The tumour did not appear to weigh so much as might have been supposed from its bulk and appearance, and in the anterior part near its base, a sensation of obscure fluctuation was perceptible. The prepuce was so involved and dragged down by the disease that the orifice from which the urine flowed was nearly in the middle of the tumour, and the penis entirely concealed; but by introducing the finger into the sheath formed by the elongated foreskin, the glans could be touched, and appeared to be healthy. The spermatic cords could be distinctly felt at the upper part of the tumour, of the natural size and feel. The glands in the groin were not enlarged, and all the adjacent parts were in a sound condition. The stream of urine was perfectly free.

From the above symptoms I was led to conclude that the disease of Ballestero was an elephantiasis of the scrotum, accompanied probably with hydrocele, and that the penis and testicles were uninjured. I therefore proposed to the patient the removal of the tumour by an operation, a measure to which he most joyfully acceded. I was kindly assisted in this operation by Dr. THOMAS A. DUFFY, of New York.

April 19th, at one o'clock in the afternoon, we proceeded to operate. The parts having been shaved, the patient was placed upon a table properly secured, and the tumour supported upon a folded sheet. The parts exhaled a very offensive smell, obviously from a long neglect of cleanliness; for from the apprehension the patient entertained of washing, my directions to cleanse himself had not been attended to.

I commenced the operation by an incision about three inches long on the anterior inferior part of the tumour, where there appeared to be a fluctuation, with the intention of evacuating whatever fluid might have been contained, and then introducing my finger or a director, and cutting upon it; but after continuing this incision to the depth of six or eight inches through the diseased cellular substance, I found no collection of fluid whatever, but a limpid liquid oozed from all points of the divided parts, and coagulated shortly afterwards. I therefore carried the knife upwards to the pubes, and then cautiously dissected through a great thickness of diseased substance down to the tunica vaginalis, which with its inclosed testicle was perfectly sound, and nearly in its natural situation, the spermatic cord being but little lengthened by the weight of the tumour, although the tunic adhered with great firmness to the surrounding diseased cellular substance. After freeing these parts carefully and entirely from their diseased connexions, I proceeded to dissect out the penis, cutting off the elongated prepuce, and then extricated the other testicle, which was in the same natural condition as its fellow and the penis. Giving these to be held out of the way, I next formed four suitable flaps from the healthy part of the integuments sufficient to form a new scrotum and covering for the penis, and finally with large and rapid incisions removed the whole of the diseased mass.

The morbid parts appeared to possess little sensibility, but on cutting close to the testicles and penis the patient complained that I hurt him in those parts. The arteries were few and small, and it was only necessary to apply a ligature to one of them; but the veins were numerous and enormously large, and although I completely divided them immediately on their being cut, the hæmorrhage from them was considerable. One of these veins was as large as the vena cava, and on cutting down to it presented an appearance so nearly resembling a convolution of intestine as to startle us for a moment, although from the state of the parts at the upper portion of the tumour, we felt satisfied that nothing of the kind could exist. The penis and testicles were inclosed and secured in the flaps of the integuments by twenty-five stitches. The patient bore the operation very well, but was a good deal exhausted by loss of blood.

The tumour weighed upwards of fifteen pounds. It contained no collection of fluid, and consisted principally of a kind of semi-cartilaginous gelatinous substance, apparently unorganised coagulated lymph, with which the cells of the cellular tissue were filled and distended, giving to the mass a white glossy appearance, and a firm, yet trembling consistence. The skin in some parts could be separated from this mass without much difficulty, and appeared of firmer texture, thicker, less elastic, and less vascular than natural; in other parts it was firmly united to the subjacent substance, and of a cartilaginous consistence.

The following are notes of the patient's convalescence, taken at the time.

19*th April*, at three o'clock, after the operation—pulse very feeble —ordered a little wine and arrow-root. At five, pulse somewhat better. At ten, pulse still feeble and 120 in a minute, but feels no pain or inconvenience.

20*th*, at 7 A. M.—pulse 120—skin natural temperature—has slept well—made water twice—considerable thirst—tongue rather dry—no pain in the wound—bowels confined—ordered ol. ricini, ℥j. and antiphlogistic regimen. One o'clock, pulse 110 and fuller—patient in other respects the same—the oil has not operated—ordered a solution of cream of tartar sweetened with manna for common drink. Ten o'clock, pulse 116, medicine has operated four times—he feels little pain—has again made water.

21*st*, 10 A. M.—Pulse 112, not so full—has slept well—dressed the wound—little inflammation—commencing suppuration—the stitches in some parts have given way, in others adhesion has taken place. Eight o'clock P. M.—Pulse 116—little pain—makes water freely—bowels confined—ordered cream of tartar and manna.

22*d*, 10 A. M.—Pulse 120—has slept well—bowels not opened—ordered sulphat. magnes. ℥j. Ten P. M.—Salts have operated—pulse 116.

23*d*, 10 A. M.—Pulse 120—wound looks well, but some tendency to burst the stitches—considerable thirst—little pain—bowels confined—ordered sulphat. magnes. ℥j.

24*th.*—Pulse 110—slept well at night—salts operated well—inflammation diminished.

25*th.*—Pulse 100—slept well—bowels open—inflammation less—several of the stitches in the integuments of the penis have given way, and where adhesion has not taken place, healthy granulations are springing up.

26*th.*—Cut away a number of the stitches; dressing with adhesive strips only—pulse ninety-eight—bowels open.

27*th.*—Pulse ninety—wound looks well—the ligature has come away from the artery.

28*th.*—Pulse ninety—took away all the sutures—the principal part of the scrotum has adhered, and that portion of the skin of the penis which has not adhered is cicatrizing rapidly.

On the 17th of July, the patient returned to the country, perfectly healed: the penis erected and he was capable of coition. The parts had acquired an appearance so nearly natural, that, at a short distance, it could not be discovered that an operation had been performed. On his departure, I recommended to him an alterative course of medicine, but I suspect it was never employed; however, at this time, (December 28th,) I am informed that he remains perfectly well.

From the appearance of the parts affected by the above described disease, some idea may perhaps be derived respecting its pathology. Among other circumstances, the little vascularity and almost cartilaginous appearance of the cutis is remarkable, and also the paucity and diminished size of the arteries compared with the dimension and number of the venous trunks. The disease was entirely confined to the skin and cellular tissue; the testicles and penis being perfectly sound and natural, and the bulk of the tumour to all appearance consisted of coagulated lymph. It would appear, therefore, that a peculiar state of the circulation in the skin, was necessary for the formation of the disease; and such a state is probably induced or promoted by the great and continual heat of a tropical climate. The exhalents acquired a disposition to throw out coagulable lymph without that sufficiently increased vigour of the vessels which usually takes place in inflammation, and by which the lymph effused is rendered a vascular organized substance; while at the same time there existed a correspondent torpor of the absorbents. The lymph effused filled the cells of the cellular tissue, gradually compressing and finally obliterating the adjacent capillaries and giving the cartilaginous appearance presented by the cutis. As the number of extreme ramifications gradually diminished, an increased quantity of blood was necessarily thrown upon the principal venous trunks, which became proportionably enlarged. It would appear also, from the little sensibility of the affected parts, that the nervous filaments had become similarly affected with the blood-vessels.

Maracaybo, December 28th, 1827.

Art. VIII. *Case of Extra-Uterine Fœtation, in which the Fœtus remained in the Abdomen forty years.* Communicated by Henry Lee Heiskell, M. D. of Winchester, Va.

THE following case occurred in the Poor-house of the parish of Frederick, in Virginia.

Venus, alias *Venus Collins*, a coloured woman, emancipated in November, 1795, by Sarah Zane, deceased, late of the city of Philadelphia, became pregnant with her seventh child, which she bore until her death, which occurred in the summer of 1825. As near as could be ascertained by a reference to the records of the clerk's office,* and the statements of her fellow servants, (one of whom was her daughter-in-law,) she was from seventy to seventy-five years of age, and carried the fœtus forty years. During this period, and in particular the latter part of it, she enjoyed remarkably good health for one in her situation, being only occasionally incommoded by a sense of weight and bearing down in her right side, which was sometimes accompanied with slight pain. In the early part of her pregnancy, she had hydropic effusions, for which, as well as I could ascertain, she underwent the operation of paracentesis abdominis. She had no show of the menses after this period, nor did she afterwards conceive again. For several years before her death, the infirmities attendant on old age, and the difficulties of providing for herself, rendered her removal to the Poor-house necessary, where she remained until her death, which happened in consequence of an attack of dysentery.

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* Perhaps an explanation is here necessary, in order that I may be correctly understood. When slaves are emancipated in the state of Virginia, it is requisite that the deed of emancipation should be recorded in the office of the county in which the parties reside, together with a statement of their ages, &c. This, although affording pretty good data on which to found an estimate, does not afford evidence of a *positive* nature, for it is seldom that owners know accurately the ages of their servants, and it is only among the most intelligent of the latter, that they themselves can communicate correct information. The record, however, enabled me to fix, with some degree of precision, the age of the fœtus, for I thereby ascertained that Venus enjoyed freedom for thirty years, (having been emancipated in 1795, and died in 1825.) Moreover it is distinctly in the recollection of her fellow servants, that she carried the "lump," as they called it, ten years before her emancipation, making in all forty years.

A post mortem examination of her body was conducted by Drs. A. S. BALDWIN and HOLLIDAY, in presence of several medical students. On making a crucial incision, through the parietes of the abdomen, and turning back the flaps, a large bony tumour was found in the lower part of the epigastric region, inclining rather to the right side, and firmly agglutinated in front to the parietes of the abdomen, and behind to the small intestines. The only morbid appearances of the viscera presenting, were a diminished size of the uterus, and an obliteration of the fallopian tubes: the ovaria were not to be found.

The tumour itself was of an oblong form, which, when removed from its attachments, weighed four pounds and six ounces. The envelope formed a perfect bony hermetically sealed sac, on all sides, but rather thin at the part corresponding to the anus, for when considerable pressure was made in the direction of its short diameter, a few drops of dark fluid made its way through the covering.

The substance of the sac or covering was of an ossific nature, of a dirty white or cream-colour, varying from two to three lines in thickness: so resisting that it required not only a strong knife for its division, but also a very considerable exercise of strength.

On removing the sac, which had formed adhesions to several parts of the fœtus, particularly the superior part of the right thigh, a fœtus perfect in its form and configuration, was presented, having apparently gone the full period of utero-gestation. Its position in the sac exactly resembled that of a fœtus in utero—having the chin resting upon the chest in such a manner that the face looked towards the left side; the trunk was incurvated, the legs bent upon the thighs, the thighs upon the pelvis and abdomen, the feet crossed, and the arms folded between the head and knees. Owing to the firm pressure of the sac, the abdomen and lower part of the chest received the impression of the arms and thighs, and the latter, in turn, from the same cause, were somewhat flattened.

The weight of the fœtus, divested of its covering, was three pounds and three-quarters, and measured, in its contracted state, eleven inches and one-half in length. So faultless was every limb and feature, (with the exception above stated,) that no one of them presented an exception worthy of special remark. The general aspect, however, of the fœtus bore evident marks of *age*, (if the remark might not be considered a contradiction.) The muscles and integuments were firmer and more consistent than in the natural state, and the latter were very generally ossified, except those portions which were covered by the foldings of the arms and thighs; consequently the integuments which partook of the ossific character, had a decided preponderance over the parts which did not take on a change of structure. The pericranium was entirely in an ossified state, over which some traces of hair were discernible, and the remains of the eyelashes were distinctly perceptible.

On examining the contents of the cranium, thorax, and abdomen, the following appearances were noticed:

The brain was a soft pulpy mass of an ash-colour, presenting nothing very remarkable in its appearance.

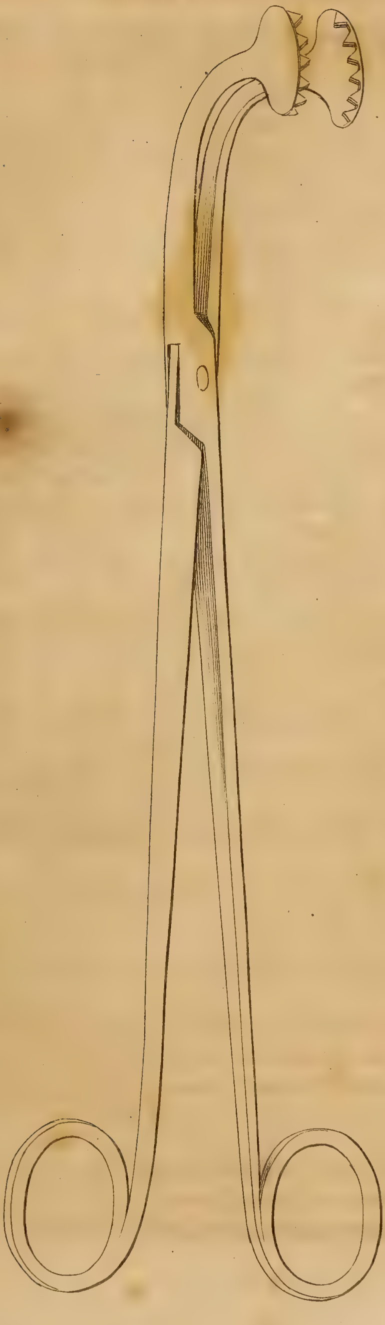
The contents of the thorax and abdomen were in a singular state of preservation—as perfect as those of a still-born child. Nothing of decay or putrefaction could be discovered in any portion of them. The meconium exhibited the usual dark appearance and consistence.

The tongue was firm and ash-coloured; and the nails of the fingers and toes perfect.

No traces of umbilical cord or placenta could be discovered.

Art. IX. *Description of a Forceps, employed to facilitate the Extirpation of the Tonsil, and invented by* P. S. Physick, M. D. Professor of Anatomy in the University of Pennsylvania. [With a plate.]

In the description of the instrument used by Dr. Physick for the excision of the uvula and tonsil, given in our last number, we omitted to mention, that occasionally there is some difficulty in passing the



Drawn & Eng'd by J. Drayton.

circular aperture in the extremity of the two plates completely and speedily over the tonsil to its base. In such cases the operation may be much facilitated, by using a forceps with a lunated extremity, to which teeth are adapted, invented by Dr. Physick, (and represented in the annexed plate,) by means of which the tonsil may be seized, and drawn through the aperture to any distance that may be deemed proper, when its extirpation can be immediately effected.

It may not, however, be improper to observe, that under ordinary circumstances, the aid of the forceps is altogether unnecessary.

The forceps is about seven inches long, curved near its extremity, which is lunated and armed with teeth. It is so accurately represented in the annexed drawing, that further description is unnecessary.

Art. X. *Case of Sudden Death connected with Organic Disease of the Heart.*

By Harper Walton, M. D.

PATRICK M'CLASKEY, æt. fifty-six years, was admitted into the Philadelphia Alms-house Infirmary, several months previously to his death, which occurred suddenly, on the 7th of March, 1827. During the month of December, 1826, he was observed to labour under considerable dyspnœa and irritating cough. His face exhibited a livid complexion, and this appeared to be produced by a congestion of the capillary vessels with imperfectly decarbonated blood. He was distressed with feelings of anxiety, and entertained apprehensions of death. This patient had frequently been observed to have a pulse remarkable for its slowness and irregularity. On the 23d of January, 1827, I examined this attentively, and found it full and voluminous; beating, also, thirty-six times in one minute precisely, with equal intervals of time between the pulsations. The venous complexion of the face, the paroxysmal dyspnœa, with a state of general debility, continued till the hour of his death.

The antispasmodic remedies, especially the lac assafœtidæ, and a combination of Hoffman's anodyne with laudanum, in small and repeated doses, were found useful palliatives of the cough and difficult respiration. Mild laxatives, with a light and easily digestible diet, were administered throughout his disease, with advantage.

On the 7th of March, about 10 A. M. I was requested to see him immediately, as he had been suddenly seized with "a fit," resembling apoplexy, only a few minutes before. On my arrival at his bed-side I found him perfectly motionless—his lips livid—his face pallid—and in short, every symptom denoting death. As the jugular veins were very turgid with blood, I immediately opened one of them, and drew a considerable quantity of blood, which, however, produced no kind of effect. I learned from those who had witnessed his death, that he had eaten his breakfast in the morning as usual, and that he had spoken to an assistant of the ward, on some familiar topic, about a quarter of an hour before his death. They also stated, that the attack was very sudden, that it resembled "a fit," in which there were violent muscular exertions, and that it lasted about ten or fifteen minutes.

Twenty-four hours after death, assisted by my friend, Dr. ASHMEAD, I made the post mortem examination. Nearly the whole of the exterior surface of the lungs was found united to the parietes of the thorax, by long-established adhesions of the pleuræ. The heart was found unusually large, soft, and flaccid. The right auricle was found much enlarged; its parietes very thin, and in some of its parts resembling a translucent membrane. The orifices of the coronary veins were considerably dilated. The tricuspid valve had a reddish colour, with less transparency than what is usually observed. The right ventricle was also dilated. Both of the left cavities of the heart were very much enlarged, and the mitral valve which intervenes appeared thickened from the effect of diseased action. The lining membrane of the left ventricle was found, in some of its portions, thickened and opaque; and near to the junction of this cavity with the aorta, there was a deposit of osseous matter.

Upon the surface of the semilunar valves, at the origin of the aorta, there were also marks of ossification, and a few points of ossific formation, were discovered upon the lining membrane of the great artery at its curve.

Immediately after leaving the heart, the aorta was found dilated to twice its natural size, and those portions of it, situated about the origin of the innominata, left carotid and left subclavian arteries, from their thinness were very easily torn.

The stomach presented a natural appearance, but the texture of its mucous coat was softer than what is usually found, in one perfectly free from disease.

On examination of the brain, a considerable quantity of effused serum was found between the dura mater and the arachnoid membrane. The lateral ventricles were much distended with this fluid. The substance of the cerebrum was unusually firm, that of the cerebellum uncommonly soft. Numerous red points, from congested vessels, appeared when incisions were made through the medullary portion of the cerebrum.

Was apoplexy in this case the immediate cause of death? It has been remarked by a physician of high authority, that "the predisposition to apoplexy is probably laid in all those causes which produce a decay in the moving powers of the circulation—in organic feebleness," &c. &c. Causes such as have been described, had evidently, for a considerable period, produced that disordered state of the circulation, which would result from a "decay in its moving powers." They increased, moreover, in force, up to the period of the patient's death. The venous colour of the capillaries of the skin, the turgescent condition of the venous system during life, the extreme slowness of the pulsations of the heart, the dyspnœa, &c. furnished proof sufficient of a greatly obstructed circulation. In this state of repletion, the venous system of the brain must have shared largely; and when we take into view the extreme vascularity of that organ, we can readily account for the sudden and fatal injury which it sustained.

According to Abercrombie, apoplexy depends "on an interruption of the course of blood from the brain," which in effect points to congestion of the vascular system of this organ and its meninges, as the immediate cause of the disease.

By Serres it has been denied that compression of the brain is a cause of apoplexy. By this position, congestion, as a cause of apoplexy, is also denied, for compression is an obvious result of a congestion of the vascular system of the encephalon. The opinion of Serres, was founded on experiments made upon dogs, in which he failed to produce apoplexy, either by compression of the brain applied artificially, or by producing effusions of blood within the substance of the cerebrum. In man, however, compression of the brain, by depression of the cranial bones, or by effusions within its substance, is a very common occurrence; and with it also, apoplectic symptoms have been strongly marked. In performing experiments upon the brain of animals, in order to ascertain the effects of its compression, it appears to me impossible, that there can be a condition produced by art, similar to that which exists in cases of apoplexy, the natural course of disease. Artificial compression cannot be made to affect the brain beyond a certain degree; that degree must be partial, though it may be great; but that produced by congestion or distention of the whole cerebral vascular system, must evidently be universal, and consequently more fatal in its effects.

By recurring to the description of appearances presented by the examination of the brain, further proof of fatal injury, by congestion of this organ, will be immediately evident. There could not indeed, be discovered any effusions of blood into the cerebrum, cerebellum, or cranial cavity, or any rupture of blood-vessels; but these are by no means necessary attendants, since observation has proved that apoplexy may happen without any of these.

In the "Dublin Hospital Reports, for 1827," will be found an interesting paper, by R. ADAMS, which contains cases illustrative of apoplexy, connected with organic changes affecting the structure of the heart.

Philadelphia, March, 1828.

ART. XI. *Thoughts on the Use of Emetics, in the Suppression and Cure of Hæmorrhage.* By N. CHAPMAN, M. D.

CONFORMABLY to its etymology, the term hæmorrhage would embrace every effusion of blood, in whatever way induced. By the older writers, five modes were assigned in which it might take place: by rhexis or rupture—by diaresis or division—by diabrosis or erosion—by diapedesis or transudation, and by anastomosis or dilatation of the mouths of the exhalents.

An arrangement founded, in part, on these several modes of its production, was early made of hæmorrhage, in which it was divided into traumatic and symptomatic, as occasioned directly by an actual lesion of vessels from acts of violence, or indirectly, by erosion from the acrimony of certain fluids—and, into idiopathic, when occurring spontaneously. The former, as appertaining to the province of surgery, will claim no share of attention in the present inquiry.

Generally, we are most liable to spontaneous hæmorrhage, the exclusive subject of my remarks, about the season of puberty, when growth ceasing, there is a redundancy of blood. But inasmuch as in the progress to maturity, the several parts of the body are unequally developed, some exceptions exist to this rule.

Early in life, as we have hitherto been taught to believe, it proceeds from the arteries, and subsequently from the veins—plethora being at this time transferred to the latter vessels, though this is not a universal law. It has, on the contrary, been commonly maintained, that in every stage of existence, it is mostly venous when coming from the hepatic, splenitic, gastro-enteritic or hæmorrhoidal vessels, while that of the nose, the uterus, and lungs, is found, as uniformly, to issue from the arteries. Excepting melæna, and even this can scarcely be considered as an exception, since the portal circulation is not strictly venous, it seems to me highly probable, that all other genuine hæmorrhages are of an arterial nature.

The causes of spontaneous hæmorrhage are numerous. It has already been hinted, that one of these is intimately dependent on the change in the balance of the circulation at the period of maturity. But such bleedings are also occasioned by local irregularities in the circulation, arising out of some peculiarity in conformation or structure, by which blood is determined unduly, or with an increased energy to parts. Thus, the short neck and large head, predispose to epistaxis or apoplexy—while the narrow and ill-shaped chest, equally invites to hæmoptysis. Certain persons, also, are singularly liable to the disease, and from different portions of the body, in whom nothing is to be discerned in the exterior configuration, to afford an explanation. It is indeed by no means uncommon for whole families to be thus distinguished. There is here, I suspect, an unusual tenuity and want of strength in the coats of the extreme vessels, or some anomaly in their arrangement, by which their capacity to resist the occasional momentum in the movements of the blood. Cases of this sort are more frequently to be met with in scrofulous habits, where laxity in the structure of the vessels generally exists.

To these causes, resulting from constitutional peculiarities, may be added others, of a nature accidental, accessary, or exciting. We may enumerate among the latter, whatever is calculated to invigorate or quicken the circulation, or to direct or concentrate its force in any one part or organ of the body, the most prominent of which are:—

1*st.* External Heat.—Its operation is witnessed on the first accession of the warmth of spring, or during the intense heat of summer, and most conspicuously in persons who carry on their occupations in close stove rooms, or work immediately over fires. It acts here, in the first place, merely as a stimulant, accelerating the circulation—and secondly, by relaxing the integuments, which support the vessels.

2*d.* Cold to the surface is sometimes productive of hæmorrhage. The mode of its action is very intelligible, and is different under opposite circumstances. Being suddenly applied, as in the shower or plunging bath, a vast shock is given to the system, and a correspondent impetus to the circulation, with a centripetal direction. But where the application is gradual, there is an accumulation of susceptibility, and a reaction with febrile excitement, on an exposure to heat or any other stimulant.

3*d.* Diminution in the weight or density of the atmosphere also induces hæmorrhage. It is illustrated chiefly in the ascent of elevated positions, and has been imputed merely to inordinate exertion. We are, however, told by DE SAUSSURE, who went to the top of Mont Blanc, the highest point of the Alps, that in a state of rest, among other effects which he experienced from the rare atmosphere, the blood gushed from his nose, ears, and gums—and which is fully corroborated by Baron HUMBOLDT, by whom the mountains of South America were ascended to their utmost pinnacle.

The preceding may be considered as causes occasionally predisposing to, or exciting hæmorrhage. But it is moreover produced by violent exertion—as by running, leaping, fighting, lifting heavy weights—or by eating or drinking in excess, or by vehement gusts of passion, or ardent venereal desires kept from indulgence, or suppression of other discharges, or by bent positions of the head or body, or by ligatures interrupting the regular return of the blood. Caused, however, in some of these modes, the case would not come within the definition of spontaneous hæmorrhage, which, as I have previously stated, must be independent of any immediate external violence.

But hæmorrhage may be of a secondary nature, dependent on interruption of the circulation from obstruction or other morbid conditions of remote organs, or consequential on similar states of the part itself from which it proceeds. Connected with the subject, it is also to be observed, that hæmorrhage is very prone to metastasis, or shifting of position, occasioned either by the sudden suppression of other discharges, naturally, or by artificial interference—or by the course of blood being invited to a different part, from a higher degree of irritation creating a predisposition to such an afflux. Thus among other instances, on checking the nasal, uterine, and particularly the hæmorrhoidal effusion, hæmoptysis, hæmatemesis, or apoplexy has speedily followed.

Concerning the pathology of spontaneous hæmorrhage, it seems now to be generally admitted, that it is owing to anastomosis, no satisfactory evidence existing of transudation taking place in the living state, the only other hypothesis on which it can be explained. This view of the subject has been very ably sustained by the celebrated BICHAT, whose arguments I shall cite from his work.*

He observes, 1. "That in no instance, where he has opened the bodies of those who have died of hæmorrhage, has he discovered any traces of rupture, though he employed the nicest care in washing and macerating the surfaces, and examining them with a microscope.*

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* Anatomie Générale, &c.

2. "That in squeezing the mucous surface of the uterus in women who have died during menstruation, a number of small drops of blood may be pressed out, which manifestly correspond to the extremities of exhalent vessels.

3. "That hæmorrhages sometimes take place from surfaces, as the skin, where the blood indubitably comes from the exhalent vessels—and which renders it probable, that the same is the case with the mucous membranes.

4. "That if rupture always preceded hæmorrhage, the internal surface of the womb would be a mere collection of cicatrices, as we must suppose one or more ruptures to occur at every monthly period of the catamenia.

5. "That if in active hæmorrhages, where there is evidently a previous congestion of blood, we should admit the possibility of a rupture, how can we suppose it to take place in passive hæmorrhage, where the powers of the vessels, almost destroyed by disease, permit the blood to pass freely from their orifices?

6. "That it is difficult to reconcile many of the phenomena of hæmorrhage—such as the extreme rapidity with which it is sometimes produced—its appearance in another part, when it has disappeared from that in which it previously existed, and its subjection to the influence of sympathy—with the supposition that it is produced by rupture.

7. "The irregularity of the appearance of the blood in some hæmorrhages—its copious flow in one instant, and its complete cessation the next—and so alternately many times in the course of a short period—are difficult to be accounted for, on the principle of rupture; for we must suppose the wounds to be opened and closed again at every alternation of the discharge.

8. "Comparing hæmorrhages allowedly proceeding from rupture, with others, they do not resemble them either in their phenomena or duration. Their cessation does not give rise to others: they are independent of all influence from sympathy—and the passions, (which have a considerable effect on the common kinds,) have none on these."

Nor is the manner in which such effusions from the extreme vessels occur, at all difficult, in my opinion, to conceive or explain. In a natural state, these vessels exercise the office of secreting, and throwing out a mucous, serous, or some more attenuated fluid. Becoming diseased however, this capacity is sometimes utterly lost, and blood which enters them passes through unaltered. As an illustration of this position, the case of menorrhagia is exceedingly striking. In health, the uterine vessels by a secretory action converts the blood into a peculiar fluid, denominated menses. Disordered, however, they are deprived of this faculty, and pure blood escapes, constituting a real hæmorrhage. The hypothesis, under review, is further rendered probable by the circumstance of the blood, in some cases, being partially changed, a sufficiency of it only remaining, to colour the mucus or other secreted fluid. We meet with such appearances in hæmoptysis, and still more frequently in dysentery. The evacuations in this disease, which exhibit every variation from pure mucus to nearly pure blood, surely can only be accounted for on such a supposition. To be more explicit, these various aspects of the stools are owing either to gradations of diseased action in the vessels of the same portion of the intestine, or while one part may be elaborating mucus, another is effusing blood, which, mixed together, presents the complicated character described. Do we not discover nearly the same phenomenon in inflammation, where the vessels of the pellucid tissues are so changed as to admit partially or entirely red blood? The fact, indeed, supplies no slender proof of the intimate connection between the two conditions of hæmorrhage and phlogosis. In each case, some change, apparently similar, is affected in the vessels, deviating from that of health, inducing in the first place a flow of blood to the part. Examined at this time, we shall have, in both instances, proof of irritation and congestion—in the former, however, relief is promptly afforded by an escape of blood, while in the latter, unless resolution takes place, by a tedious operation in which serum is extravasated, or by some of the still more lingering terminations of inflammation. Why we have the one or the other result, is referrible to some slight difference in the state of the vessels at the moment, not easily appreciable, and perhaps unsusceptible of a clear explication.

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* By Marendel, a late writer of high authority, who has with infinite care made similar examinations to a great extent, this statement is fully confirmed, and such seems now to be admitted as a demonstrated fact.

Hæmorrhage from accidents usually occurs in a sound part, and if the injury be slight, without contusion or laceration, it seldom entails any permanent mischief. But in spontaneous effusions of blood, the vessels having been previously confirmed in wrong action, should not the loss of blood be adequate to the subversion of that action, inflammation arises, which runs through its ordinary course to its final eventuations. Examples to this purport we have in hæmoptysis.

The lungs are exceedingly liable to hæmorrhage, and which is usually announced by a group of precursory symptoms, too often succeeded by active phlogosis, suppuration, and ultimately inveterate consumption.

As I would wish it to be understood, the doctrine which I have endeavoured to expound supposes, that spontaneous hæmorrhage is an effusion from the exhalents of some of the elementary tissues, and not at all occasioned by rupture of the large vessels entering into the substance of the organs. Even in those cases where clots of blood are met with in the latter situations, they are owing to the same sort of exhalation. Hæmorrhage may occur in the cellular and dermoid, and also in the serous membranes, the pleura, the pericardium, the peritoneum, and arachnoides, &c.—extravasated blood having been found in their respective cavities. But it is in the mucous tissue, in all its distributions, though especially in the lining of the alimentary and pulmonary passages, that it most commonly takes place, and which may be explained as well by the greater vascularity of this tissue, as by its freer exposure to morbid agencies. Every one of the more common cases of hæmorrhage, as epistaxis, hæmoptysis, hæmatemesis, and the uterine in the unimpregnated state of the organ, belong to this tissue, and are thus induced.

Most writers have considered spontaneous hæmorrhage as either active or passive. The first variety is very often unequivocally an inflammatory affection. It is preceded by sensations of local fulness and uneasiness, amounting in some instances to positive pain, attended by more or less of the febrile condition, and which view is confirmed by the sizy aspect of the blood that may be drawn. The febrile movement sometimes observes the law of periodicity. Epistaxis is an ordinary concomitant on the hot stage of intermittents, genuine and spurious, ceasing with its subsidence—and cases are recorded of every variety of hæmorrhage, which reverted with fever at stated periods, weekly, monthly, or at more distant intervals.

But hæmorrhage is also of common occurrence, connected with constitutional debility, without any general increase of vascular excitement, and to which the appellative designation of passive is applied. Even here, however, we may mostly detect some local action or disturbance of function. Much idle discussion has been of late maintained, on the pathological distinction in hæmorrhage to which I have alluded. Consulting what has been said on this point, it will be perceived, that it is really a dispute of definition, the parties attaching different meanings to the terms employed. The term passive was adopted, conventionally, to signify not an absolute want of action, as it strictly imports. but a weaker state, in contradistinction to that activity which belongs to febrile hæmorrhage, and in this sense is not altogether inappropriate, and should be retained till a better is suggested, as practically useful.

Conceding so much, or that topical irritation and congestion may exist with general vascular weakness, and this is all which, perhaps, will be demanded, I must still insist that extravasations of blood do take place, though scarcely to be considered as genuine hæmorrhage, from the feebleness of vital power, of which we have proofs at the close of malignant fevers, and other diseases of exhaustion. As after death where we often meet with large livid patches on the surface, from sanguinary exudations, as well as collections of blood within the cavities, which as regards the former there is a certainty they did not pre-exist, so does it happen in the last expiring efforts of life, under the circumstances above stated. Nearly in the same way, have we serous effusions constituting œdema or more general hydropic disease, in the most opposite conditions of system, either as the result of a highly excited or enfeebled state, in the latter, from a mere leakage of the exhalents. It does, indeed, sometimes happen, that this tendency to sanguineous extravasations pervades the entire exhalent system, blood escaping most profusely from every tissue.* In this fact we are furnished with a conspicuous illustration of the analogy between hæmorrhage and dropsy, once urgently alleged, then abandoned, and recently again, and, as I think, properly revived.

In approaching the practical part of my subject, I am met at the very threshold by the question, whether it is expedient in any case of hæmorrhage to interfere, or whether at all times, it should not be left to the uncontrolled efforts of nature?

It was a doctrine originally advanced by STAHL, in which he was followed by his disciples, and some later authorities, that these discharges are designed to remove a dangerous repletion of system, which being sufficiently effected, they spontaneously cease. That such a view, with certain limitations, is correct, cannot be denied. Most hæmorrhages are undoubtedly salutary in their tendencies, and it is also true, that the sudden checking of the hæmorrhoidal flux is dangerous, where there is a disposition to any cerebral affection—and equally do these remarks apply to the bleedings from the nostrils in the same cases, as well as in fever and many other acute diseases. Nor can it be denied, that the flow of blood is often duly suppressed by the natural resources. But admitting this, it will still appear that we cannot uniformly confide to nature the charge of these cases. Generally wise and efficient in her endeavours, she is sometimes very much the reverse, and we are constrained, in order to prevent evil, to counteract her, by taking the management out of her hands. As an example, she frequently neglects, or is not able to give to these discharges a proper direction, and instead of blood issuing from the pituitary or rectal vessels, it is poured into some cavity, from which it cannot escape or be removed. As much is her blindness or incompetency evinced in allowing a wasteful expenditure of blood, in enfeebled states particularly, productive of alarming exhaustion, and where the hæmorrhage is profuse, she cannot always, by syncope, or by any other means, afford relief. These then are the circumstances which demand the interposition of art, and without which, indeed, in numerous instances, the event must be inevitably fatal.

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* Among other instances of this kind, I attended a child with Dr. Dewees, in the summer of 1826, who, in the advanced stage of cholera infantum, was suddenly seized with an hæmorrhage from the vessels of the skin, the mucous coat of the alimentary canal, the serous lining of the great cavities, and from the gums, which continued so copiously that it died in a few hours. During the prevalence of the varioloid epidemic in this city, in 1823, I met with several cases of dermoid hæmorrhage, which attended or wholly superseded, the cutaneous eruption, owing apparently to the inability, from exhaustion, of the extreme vessels to institute the secretory office by which pustules are formed.

It may be useful as preliminary to my remarks on the use of emetics in hæmorrhage, to advert to those principles on which the treatment of the disease is generally conducted.

The leading indication in all profuse cases, is to suppress the flow of blood, and when they are active and febrile, it is done—

1st. By reducing the quantity of the circulating fluids, by direct evacuations, especially by bleeding, general and topical.

2d. By subduing the force of vascular action, by what are termed *refrigerants*, which may be external or internal, the one consisting of cold applications, and the other of a set of medicines so called, as nitre, &c.

3d. By the sedative articles, or such as are presumed to abate the energies of the moving powers of the circulation, without any depletion, as digitalis, &c.

4th. By constringing the mouths of the vessels. Whether there be a medicine with such a property, is to me exceedingly problematical, and perhaps does not exist. It is supposed, however, that we are in possession of many, as certain preparations of lead, of copper, of zinc, of alum, and the mineral acids, besides several from the vegetable kingdom. Directly applied to the vessels, some of these are styptics. But acting through the medium of the stomach, they probably have no such effect.

5th. Causing a revulsion in the circulating fluids, from the affected part to one less interesting to the animal economy, is another principle in the cure of hæmorrhages, which occasionally succeeds, where the means are judiciously selected and well-timed. It is customary to resort to stimulating pediluvia, or embrocations of the same character, or sinapisms, or blisters to the extremities, with this view. Yet these are often equivocal remedies, and in point of efficacy, cannot at all compare with leeching or cupping, and vesication, applied as nearly as possible to the seat of the mischief.

To prevent the recurrence of the hæmorrhage, by removing the causes which dispose to its production, is the second indication.

In the active shape of the disease, it is obvious that the most effectual measure will consist in such diet, as is the least calculated to fill the vessels with blood, or excite their movements. Every thing else, indeed, will be only palliative, and cannot be employed for any length of time without injury. Yet, when this alone does not prove adequate, we must recur to the evacuant means.

As relates to passive hæmorrhage, in the ordinary acceptation of the term, the same objects are to be attained. It is to be recollected, that though here general debility may exist, there is topical congestion or phlogosis to be relieved by essentially similar means, as in the other form of the disease, graduated to the state of the case. The prophylactic course, however, is sometimes different.

Great debility existing, we endeavour to invigorate the system and equalize the circulation by the well-regulated use of tonics, and by a course of living co-operating to the same end, without, however, it having any heating or stimulating tendency. Even in these cases, local irritations or congestions must be watched, and timely removed, by topical means more especially.

Not a little is to be expected from exercise, as an auxiliary to diet, in the prevention of each state of hæmorrhage. It has eminently the power of promoting the secretions and excretions, of renovating healthy action, and especially of re-establishing a just equilibrium in the circulation, thereby obviating those engorgements, or local accumulations, which prove the proximate cause of the effusion.

In the management of hæmorrhage, however, too much importance is usually attached to the suppression of the flow of blood. When copious, great alarm is created in the individual himself, as well as in his friends, and from which the medical attendant is not always entirely exempt. Every exertion is therefore made to check it, and this being accomplished, the anxiety which previously existed heedlessly subsides. Thus lulled into false security, the patient reverts, after a time, to his former habits, without any permanent plan of treatment, till again awakened to a sense of danger by a repetition of an attack, and in this way he proceeds, till the complaint is often irremediably fixed. Now, the hæmorrhage in itself is comparatively of little moment—for the most part, indeed, beneficial, and the real object of attention should be the correction of the morbid condition giving rise to it, and which by neglect, in numerous instances, leads to the most disastrous consequences.

In contending for the utility of emetics in spontaneous hæmorrhage, I do not mean to insist on their employment to the exclusion of other remedies, or that they are adapted to all cases. Much nicety of discrimination, on the contrary, is sometimes required in the direction of them, and there are states of the disease to which they are utterly inapplicable. Thus, I should consider them as inappropriate, whenever high vascular excitement, or considerable topical affection, congestive or inflammatory, exists. These are states calling for direct depletion, by venesection or topical bleeding, and their immediate auxiliaries, as antecedent remedies. My experience with emetics is chiefly confined to passive hæmorrhage, though I have occasionally tried them, and not unavailingly, in the reduced states of the other form of the disease. Their modus operandi under the circumstances stated, seems not obscure, and the practice may be vindicated *à priori*, or independently of any evidence of facts in support of the deductions of reasoning.

It has been shown, that in hæmorrhage there is a want of equilibrium in the circulation, occasioning irregular determinations of blood —some one organ being surcharged at the expense of other portions of the system. The impression of the emetic, in conformity with an old aphorism, "*ubi stimulus, ibi affluxus*," probably invites primarily, a current to the stomach as a centre of fluxion, and thereby immediately tends to exonerate the previously affected organ from its oppressive congestion—and secondarily by filling the cutaneous vessels especially, redistributes the blood, and hence restores that just balance which had been subverted. Effects like these, from puking, are very observable in the congestive forms of fever, and other acute diseases. In our late typhoid epidemics, both of the winter and summer, how effectual this process proved in relieving engorgements of the great viscera, is sufficiently known. Many were the instances which I saw myself of its extraordinary success, where the liver, or the spleen, or the lungs, even the brain was unduly loaded.

But more than I have indicated, is to be ascribed to emetics in restraining hæmorrhage. Nausea itself represses the force of the circulation, and in some cases must be useful—though it is to their controlling influence over the whole of the capillaries, changing that condition which admits of sanguineous exhalation, that their efficacy is mainly owing. Exactly as colliquative perspiration, watery diarrhœa, and hydropic effusion, are sometimes arrested by vomiting, so does it operate in hæmorrhage. The exhalents in all these cases, under certain circumstances, become morbidly relaxed, and a serous or sanguineous discharge ensues, according to the peculiar modification of condition which may exist at the time. Nor is the use of emetics to be limited merely to restraining the flow of blood. By their revolutionary power, much advantage, when occasionally repeated, may be derived from them, in breaking up those habits and associations which continue the predisposition, and also in the removal of absolute disease, by which hæmorrhage is maintained.

It did not, moreover, escape my recollection, in speculating on this subject, that doubting, as most practitioners do, the propriety of vomiting, nauseating doses of emetics, are highly approved in every variety of hæmorrhage, as well to suppress the flow, as to obviate its return, and it seemed to me, *a fortiori*, that the former mode of exhibition ought to be more effectual.

It now remains only to detail some of the results of my experience, in confirmation of the efficacy of the practice which has been suggested, to be illustrated by a few examples.

In 1807 I attended a young man of consumptive tendencies, who, for several months, had suffered from hæmoptysis, and was treated by digitalis. Being suddenly attacked with an alarming effusion of blood, he took, before my arrival, an exorbitant dose of the medicine, which excited vomiting, and from that moment the hæmorrhage ceased—he became convalescent, and ultimately recovered. Effects so decided, I did not, however, impute simply to the act of puking. As often happens, from the operation of digitalis, an extremely distressing nausea continued for several days, and to which, it is more likely the permanent benefits were owing. Encouraged by this case, and perhaps in some degree influenced by my pathological views, I have since pursued the practice to a considerable extent, and with unequivocal advantage. The emetic, however, which I have on the whole preferred, is ipecacuanha, though sometimes the tartarized antimony was employed, against which, when cautiously prescribed, I can discern no solid objection. It will be well in most instances, and especially where there is any increased vigour of the circulation, to follow up the impression of the emetic by nauseating doses of the same article for some length of time, so as to guard against relapses—and should such be suspected, from any premonitory symptoms, to anticipate the crisis, by a recurrence to vomiting.

This is no new practice in hæmoptysis. As early as the middle of the last century, emetics were strenuously recommended in the disease by Dr. Bryan Robinson, of Dublin, whose publication on the subject attracted great attention. To his evidence in favour of them might be added the attestations of several other respectable writers. Cullen, however, having tried the practice unhappily in a single case, did much towards its condemnation from the great weight of his authority, as few traces are to be met of it subsequently in our medical records. Yet though neglected, it was not entirely abandoned. We learn from an authentic source, that the late Dr. Willis, so celebrated for his skill in the treatment of mania, and especially for the cure of the king of England, resorted to it freely in hæmoptysis, and declared that a very lengthened experience had taught him to confide in it above all other means, as well on account of its safety as efficacy.

Collateral support is also given to it from the alleged utility of emetics in pulmonary consumption. It has even been proposed to resort to them every two or three mornings for a succession of weeks, under the idea that the effects of a sea voyage might in part be attained. Commenced by Maryatt, this practice has since received particularly the approbation of Simmons and Thomas, of England, and Senter, of our own country—besides that of some highly respectable physicians of my acquaintance, who have withheld their testimony from the public. It has indeed been maintained by one of the writers on the subject, that emetics in these cases, "by their wide and general operation, subdue vascular action, remove cutaneous constriction, promote absorption from the lungs, facilitate expectoration, lessen dyspnœa, allay cough, and check the sanguineous discharge, calm the system by equalising excitement, and re-establish that equality in the circulation on which the restoration and maintenance of health so materially depend." Even admitting that such language is dictated by an ardent enthusiasm, it must still be confessed that it is warrantable to a considerable extent, and leads to the conclusion that this remedy has been too little employed in phthisical affections, whether attended by hæmorrhage or otherwise.

Efficacious, however, as emetics may be in hæmoptysis, they are not less so in hæmatemesis. This, according to the strict definition of the term, is a vomiting of blood, supposed to come from the vessels of the stomach. But since similar discharges may proceed from the intestines, the liver or spleen, and ejected by puking, the whole are comprehended under the same head by some of the modern writers. It is often indeed not easy from the obscurity of the diagnosis, to make any satisfactory discrimination. But in the properly gastric cases, it will generally be found that a dyspeptic condition has previously prevailed. The precursory symptoms are anorexia, furred tongue in the centre, with florid edges—cardialgia, flatulence, sour fœtid eructations, oppression after eating, tenderness of the epigastrium, constipated bowels, dry skin, either pale or sallow, depression of spirits, a weak, or corded and irritated pulse, and muscular weakness. An attack is mostly ushered in by a sense of tension of the stomach, and of burning or pricking in it—nausea—anxiety and straitness of the præcordia, with a disposition to syncope, attended by coldness of the surface, and with a still feebler pulse, and increased debility.

Consulted in time, the hæmorrhage may be commonly prevented by topical bleeding, and an epispastic over the stomach, gentle laxatives, and abstinence. But where it already exists, and is profuse, which it is very apt to be, an emetic is the means entitled to the greatest confidence. Nor should we be deterred from its use, by the appearance of exhaustion. It is a state to be expected, and so far as I have seen, the recuperative energies are uniformly revived by the operation of the remedy. I shall select two cases out of a number in my possession, to exemplify the safety and utility of the practice.

In 1818, I had under my care a girl of eighteen years of age, of a leucophlegmatic temperament, exceedingly distressed by the train of dyspeptic symptoms already enumerated, who, while under the common treatment for such affections, was in the night attacked with a vomiting of blood. On my visiting her, I learnt that in less than an hour she had thrown up about three pints, and the hæmorrhage continued after I saw her till nearly one pint more was discharged. The usual astringent remedies were unavailingly tried, and as the exhaustion had become so extreme as to menace speedy dissolution, I resolved on the use of an emetic, encouraged by my experience of its success in some former cases of less violence, and ipecacuanha was accordingly exhibited very freely. In about twenty minutes she ejected a large quantity of dark grumous blood, soon after became composed, her pulse rose, the skin resumed its warmth, and before morning I left her doing well in every respect. No return of the hæmorrhage took place on this occasion, and in a few weeks she went into the country, where I understand she completely recovered.

Two years ago, I was consulted by a lady, past the meridian of life, who informed me, that from the cessation of her menses, which had happened some six months previously, she had been much afflicted by head-ache, burning sensations in the stomach, præcordial uneasiness, tension and tumidity of the epigastrium, nausea, and periodical vomitings of small portions of blood.

Her appearance at this time was altogether cachectic, and on the investigation of the case, I was confirmed in the suspicion which I at once adopted, that if not arrested, it must inevitably lead to a serious attack of hæmatemesis. But she was prepared to take a short journey, and confiding more in exercise and fresh air than in my prescriptions, it was agreed that they should be postponed till her return to the city. In about ten days afterwards my prediction was verified, for in the act of getting out of a carriage, she was seized with a copious vomiting of blood, repeated at short intervals, till the whole amounted to several pints. Her pulse being active, the skin tolerably warm, and some sensibility of the epigastrium existing, the treatment was commenced by leeches, followed by cold applications over the stomach, and small portions of acidulated drinks. No advantage, however, resulted from these measures, and debility becoming alarming, she at length consented to take an emetic, which evacuated some considerable masses of blood, and for several hours she was greatly relieved. But the vomiting again recurred, and I had to repeat the emetic, which proved very effectual. Convalescence henceforward took place, and by a properly regulated regimen chiefly, her health was pretty well re-established.

Not much is to be found of this practice in hæmatemesis. Excepting indeed, some cases very analogous in character to those I have related, and which were contained in a late volume of the Dublin College of Physicians, successfully treated in precisely the same way by Dr. SHERIDAN, I have been unable to discover any notices of it.

As to the use of emetics in uterine hæmorrhage, I have not much to say. Elsewhere* I have endeavoured to show, that the catamenia, instead of blood, as was formerly imagined, are a peculiar fluid, resulting from a genuine secretory action of the uterus, Nor is it true, that all periodical discharges from that organ are catamenial. Every case, indeed, of very profuse discharge which has come under my observation, consisted of pure coagulable blood. Menorrhagia, or inordinate menstruation, I believe, is of rare occurrence, and may be securely entrusted to nature. It is those effusions so liable to take place, when the uterus is no longer capable of performing its secretory office, as previously explained, and which sometimes recur with such regularity as to be confounded with menstruation, that call for artificial assistance, and will claim my attention. They of course belong to the unimpregnated state of the organ. In some instances, these hæmorrhages are immediately dangerous, nearly always most seriously detrimental to health, and often prove intractable to the customary mode of treatment. Embarrassed by a case of the kind, which had resisted the best efforts of some other practitioners, I determined to venture on an experiment with emetics. To this conclusion I was led by the reflection, that there is no peculiarity in uterine hæmorrhage, not reconcileable to the common principle on which I had conducted the cure of other forms of the disease. It struck me, that by the revulsion of vomiting, distinct from the secondary effects of the process, the flow of blood might be checked, and that in the interval of its recurrences, by occasional repetitions of the remedy, the uterus might be reinstated in its secretory functions. Emetics I was also aware, are among the most active and certain of the emmenagogues, by which I mean a remedial power to arouse the energies, or otherwise to reinvest the uterus with the faculty of secretion when suspended or perverted. I had seen their salutary agency in this respect, as well in amenorrhœa as fluor albus, and indulged the hope, that if in these cases, they could revive a natural action or rectify a depraved one, so might they be serviceable in the same way in hæmorrhage.

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* Vide Chapman's Therapeutics.

The case to which I have referred, occurred at the close of the last autumn. It was that of a lady in the prime of life, from a distant part of the country, who came to consult me. Her appearance was sickly, and she told me that from her marriage, a year and a half before, she had been subject to hæmorrhage, at first inconsiderable and monthly, progressively however, increasing in quantity, and renewed at shorter intervals, till it had become so copious, on some occasions, as to endanger her existence. This distressing situation was greatly aggravated by her sterility.

As the ordinary routine of remedies had been ineffectually exhausted, I suggested a trial of a course of treatment, in conformity to the views I have just presented. With this advice she returned home, promising strictly to adhere to it. Two months ago I received a letter from her, in which she informs me, that on her journey she had a comparatively slight hæmorrhage, though, under an apprehension of its increasing, recourse was had to an emetic, which promptly suppressed it: that by this favourable result, fresh confidence was inspired in the proposed practice, and she had accordingly taken six emetics at the interval of eight days each, when regular menstruation returning, all solicitude ceased, and more especially as her general health had sensibly improved.

How far emetics are proper in epistaxis, I am not able to determine from any experience. Governed, however, by the authority of Stoll by whom they are recommended, as well as by analogy, I should be led in certain cases to resort to them. Epistaxis, though usually checked with ease, does sometimes prove otherwise, and even terminates fatally, of which I have known two instances in this city, and many others are recorded. No hæmorrhage is indeed occasionally more profuse, or in which such large quantities of blood are lost.* When it presents such a formidable aspect, much might probably be gained by vomiting, and especially as such an occurrence is usually in the atonic state of the disease.

In hæmaturia, the propriety of the practice is sanctioned by usage, and I cannot see why it may not be appropriate to inward hæmorrhoidal effusion, sometimes so exhausting and difficult of restraint.† To hæmorrhage, either of the cutaneous or cellular tissue, I know it is well adapted. But I cannot at present be permitted to occupy more space with details The subject may hereafter be resumed.

I shall close these desultory remarks on hæmorrhage with a case, which is well calculated to illustrate both the pathology and practice which I have attempted to support.

In consultation with my friend Dr. Dewees, I was requested in the winter of 1824, to visit a young man, apparently in other respects in good health, with bleeding from the gums to be traced to no assignable cause, which had continued for three days, averaging each day about three pints. On inspection, neither sponginess, nor other affection of the gums seemed to exist. The teeth were also sound. But on wiping the gums with a cloth, the blood was perceived oozing, as it were, from innumerable pores, so that in a few minutes the mouth would fill with blood. Every plausible means of relief, general and topical, having been antecedently directed without success, an emetic was administered, and on its operation, the hæmorrhage ceased. Subsequently it partially returned, and by a repetition of this remedy, it was again suppressed, and we had no further trouble with the case.

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* "Bartholin mentions a case of forty-eight pounds. Rhodius another of eighteen pounds within thirty-six hours, and a respectable writer in the Leipsic Acta Erudita, a third of not less than seventy-five pounds within ten days. In the Ephemera of Natural Curiosities, is a case where the quantity is not stated, probably from the difficulty of taking an account of it, which continued without cessation for six weeks."—*Good's Study of Medicine, Vol. II.*

† This is also one of the most copious of the hæmorrhages. There is a case related by Hoffman, of a woman who bled more than twenty pounds in less than twenty-four hours, and by Borelli, that of a man of more than ten pounds at one time. Calvert, a late writer of good authority, gives a case of a woman who discharged three chamber potsful of bloody fluid in two hours, and another who voided a pint of pure blood daily, for near a fortnight. Lieutaud has a case in which six quarts were effused in two days, and by Panaoli we are told of another where a pint was discharged daily for some years. The celebrated Copernicus, and Arian, the heretic, are said in this way to have bled to death

Art. XII. *Case of Axillary Aneurism, (from the reduction of an old Luxation of the Shoulder-joint,) in which the Subclavian Artery was tied.* By W. Gibson, M. D. Professor of Surgery in the University of Pennsylvania, &c. &c. [With two plates.]

John Langton, aged thirty-five, a muscular athletic man, about six feet high, by trade a labourer, accustomed whilst at work to the use of a pint of spirits daily, called upon me on the 6th of March, 1828, and presented a letter from Dr. Lewis Horning, dated Millers-town, Pennsylvania, recommending him to my notice, on account of a luxation of the left os humeri at the shoulder-joint. From the patient I ascertained that the accident had occurred nine weeks before, from a violent fall upon the shoulder; that soon afterwards attempts had been made, four different times, to replace the bone, but without effect; that very considerable force had been employed each time, and that upon one occasion his body had been suspended upon the axilla over the top of a door.

On the 6th of March, the patient was admitted into the Alms-house Infirmary, and placed on low diet and the antiphlogistic system. This treatment was commenced about the fourth day after his admission. He was bled, regularly, to the extent of ℥x. daily, kept on barley water, purged occasionally, had the shoulder carefully rubbed with oils, and the arm gently moved, several times a day, in various directions.

This plan was pursued unremittingly until the 15th of March, on which day it was determined to attempt to restore the bone to its natural situation. Assisted by my colleagues, Drs. John R. Barton and R. Harlan, and by the house pupils, and in presence of Drs. Jackson and Mitchell, Dr. Canby, of Indiana, and several medical students, I commenced the operation, by extending the patient upon a long narrow table, covered with blankets, placed a soft ball of old linen in the axilla, over this a *counter-extending* band, which was fastened to a staple, then an *extending* band above the elbow, with its end secured to a pulley, which pulley was, also, attached to a staple, and lastly secured the scapula, by a band so contrived as to embrace the acromion process, like a cap, and thence extending across the body, obliquely downwards, and held by two assistants, seated upon the floor. The apparatus being thus arranged, the forearm was bent upon the arm at a right angle, and used occasionally, by Dr. Barton and myself, as a lever, through the medium of which very slow and gentle rotatory motions were communicated to the head of the displaced bone, whilst at the same time, the pulley, under the management of Dr. Harlan, kept up a very moderate and continued extension, for at least half an hour.

Not appearing to have the desired effect, this mode of proceeding was laid aside, and the patient placed in the upright position on a stool, and extension and counter-extension again employed by pullies secured to staples in the floor. All our efforts thus made proving equally unavailing, we determined to lay the patient again on the table, and to renew our former attempts. Accordingly extension and counter-extension were kept up in the horizontal direction for another half hour, but without much impression being made, apparently, upon the muscles of the arm. Under these circumstances, a pupil was directed to open a vein in the right arm; from this twenty ounces of blood were drawn, without inducing syncope. To bring about, if possible, this state of the system, twelve grains of tartrite of antimony, dissolved in four ounces of water, were ordered, and gradually administered, without producing any other effect than slight nausea. Our efforts, notwithstanding, were continued *in the most gentle and cautious way possible*, sometimes by the pullies, sometimes by the heel in the axilla, when we had the satisfaction, at last, to find the head of the bone gradually approach, and finally enter, with an audible snap, the glenoid cavity, but not until the lapse of one hour and three-quarters from the commencement of the operation.

The patient, after being put to bed, complained chiefly of weakness, of numbness throughout the arm, of slight excoriation of the arm-pit, and bend of the arm, from the counter-extending and extending bands, and was smartly purged by the tartar emetic given during the operation. In other respects, he said, he was comfortable, and slept during the night without an opiate.

March 16*th*—I saw him at eight in the morning, and observed a general swelling over the deltoid and part of the pectoralis major muscles, but not more than could have been expected under similar circumstances. Upon pressing, however, upon the most prominent part of the swelling, I was surprised to find a distinct pulsation of an aneurismal character. During the day both the swelling and pulsation slowly increased, and satisfied me that an aneurism had formed in the axillary artery. Dr. Barton saw the patient in the afternoon, and drew the same conclusion.

March 17*th.*—At 10 o'clock, A. M. Drs. Barton, Harlan, and myself, saw the patient in consultation. The tumour and pulsation were somewhat greater than on the preceding day. At 3 o'clock, P. M. we saw him again, and the tumour appearing still to augment, though slowly, it was decided that the *subclavian artery* should be tied without delay, lest the clavicle should be so raised by the aneurism as to render the operation afterwards very difficult, if not impossible. Accordingly I commenced the operation, almost immediately, in presence of Drs. Fearn, Pickering, Knox, Montgomery, Johnson, the house pupils, and several medical students, (assisted by Drs. Barton and Harlan,) by extending an incision from the acromial margin of the sterno-mastoid muscle, for three inches and a half along the course of the clavicle, through the integuments, platysma myoides, &c. until the external jugular vein was exposed. This vessel being held aside, by a blunt hook, the incision was gradually, and very cautiously deepened, by the alternate use of the edge and handle of the knife, until the subclavian artery was laid bare, just where it passes the edge of the anterior scalenus muscle, and lies on the first rib, and its pulsation distinctly felt. I next attempted to pass a blunt steel needle, armed with a strong round ligature, made of sadler's silk, fixed in Physick's forceps, but the needle broke near its eye, in the act of pushing it beneath the vessel. The instrument employed by Wardrop for tying the carotid artery, (consisting of a flat silver cannula, containing a steel stilet,) was next tried, but without effect. At last, though not without some difficulty, the common silver aneurism needle was passed beneath the vessel, without disturbing its connexions, except in the slightest degree. The attending surgeons, and most of the spectators, having satisfied themselves that the ligature had been fairly deposited beneath the vessel, without including any of the nerves or other parts in its vicinity, it was tied by three firm knots—at the depth of three inches below the clavicle, nearly in a perpendicular direction—when the pulsation in the tumour ceased instantaneously.* The edges of the wound were brought together with adhesive straps, supported by lint and a compress, the patient put to bed, and forty-five drops of laudanum administered. In fifteen or twenty minutes after the operation, the tumour, which previously was tense and elastic, was found much diminished, soft and flaccid to the touch.

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* Having experienced much greater difficulty than I expected, in passing the ligature beneath the subclavian, I called, soon after the operation, upon Mr. Schively, one of the most ingenious and eminent cutlers in the United States, and requested him to make for me an instrument, of the exact shape and size of the ordinary aneurism needle, calculated to hold a steel stilet, capable of being passed, without difficulty, beneath deep-seated vessels. His ingenuity soon removed the defects usually complained of, and produced an instrument, which, I do not hesitate to say, in point of simplicity and usefulness, is as yet unrivalled, if I may judge from an experiment I have since performed upon the subclavian artery of the dead subject, in presence of Messrs. Hall, Nott, and Levert. It consists of a silver cannula, fixed in a wooden handle, surrounded, (near the part where the cannula joins the handle,) with a silver collar, through which a steel stilet, made of a narrow watch-spring, the length of the instrument, passes, and immediately afterwards enters an opening just below the collar, in order to traverse the whole cavity of

6 o'clock in the evening—patient expressed himself easy and comfortable. Heat of the limb apparently somewhat greater than it was immediately after the operation.

10 o'clock at night—complains of thirst, and is restless—heat of the arm not perceptibly increased. Being unable to see the patient during the night, and only at particular intervals during the day, I requested house pupil Chew to keep an accurate account of the symptoms and treatment—and the following is his statement.

" *March* 18*th*, 9 o'clock, A. M.—Slept but little last night—having been disturbed by dreams and pain in the arm. He feels less pain, however, this morning, though the sensibility of the arm is somewhat increased. Temperature of each arm equal—95°. Last evening the temperature of the left arm, was 94°, that of right, 96°. Pulse not yet felt in the arm operated upon. In the other it is 100, and rather tense. Tumour has subsided very much. Thirst not great. Barley water continued as drink and diet.

3 o'clock, P. M.—No material alteration.

9 o'clock, P. M.—Little or no pain in the arm, but complains of a disagreeable, tingling, sensation, which frequently begins at the shoulder, runs down the arm, and seems to pass out at the elbow, leaving a sensation in the forearm and hand, as if they were enlarged

the cannula and emerge at its point. This extremity of the stilet is covered with a flattened silver cap moderately blunt, whilst its other or *upper* extremity, passing upwards, from the collar above mentioned, lays parallel with the handle and has an eye near its end for holding a ligature. A small screw, for the purpose of fixing the stilet while the surgeon is in the act of passing the instrument beneath the artery, works through the silver collar, and may be used or not, as the surgeon pleases.

It will be seen at once, that the great advantage which this instrument possesses over those in common use is, that the ligature being held by the *upper* instead of the lower end of the stilet, the surgeon can draw the stilet along with the ligature, at once, through the cannula and under the vessel—whereas, in other instruments, the ligature being passed through the *lower* end of the stilet must, after having been carried below the artery, be in part retracted again before the surgeon can tie it. An additional stilet, if necessary, with a *sharp* point, may accompany the instrument.

The use of the instrument, however, as well as its form and size, will be better understood by the drawing in plate III. fig. 2 and 3.

to the size of a foot in diameter. There is only a sense of soreness in the wound. Temperature of the arms unaltered. No pulsation perceptible at the wrist. Pulse in the right arm, one hundred and twelve, small and tense.

March 19*th*, 9 o'clock, A. M.—Little sleep last night—owing to dreams and starting. No material change in pulse or temperature.

3 o'clock, P. M.—Pulse more frequent, (128,) quick, small, and tense, but more irritable than febrile. Temperature of right arm, 96°; of left, 98°. Skin dry, but heat of it not in proportion to frequency of pulse. Bowels not moved since the copious purging produced by the tartrite of antimony, administered during the attempt at reduction. Ordered sulph. magnes, ℥j. aq. pur. ℥viij.—℥ss. occasionally, until it operates.

9 o'clock, P. M.—Bowels have been gently opened twice. Pulse less tense, though still frequent, quick, and irritable. Skin moist. Complains only of some soreness about the wound. No pain in the arm. The tingling sensation, and sense of enlargement of forearm and hand, not so troublesome. Sensibility of arm slowly increasing, but the pulse at the wrist not yet distinguishable.

12 o'clock at night.—Skin dry, with restlessness. No other important change. Ordered acetate of opium, gtt. xx.

March 20*th*, 9 o'clock, A. M.—Slept tolerably well last night, after the opiate. Pulse 128, but not so quick and irritable as last night, though small and tense. Skin about the neck and face a little jaundiced and moist. No pain. Has a keen appetite, but allowed only barley water.

9 o'clock, P. M.—No material alteration during the day, except a reduction of temperature in both arms—being 94° in each.

11 o'clock P. M.—Has not slept, nor inclined to sleep. Ordered acetate of opium, gtt. xx.

March 21*st*, 9 o'clock, A. M.—Slept about four hours during the latter part of the night. Occasionally disturbed by dreams, delirium, and starting. Pulse more frequent, (136,) has lost much of its quickness and tension, and is smaller and weaker. Skin moist. No pulsation in left arm. Temperature of it 98°—that of right arm 96°. Spots of erysipelatous inflammation about left shoulder, and whole limb considerably swollen. Dr. G. ordered the wound to be dressed. Done in presence of himself, Drs. Barton and Harlan. Sides found in contact, and a little pus formed. Surface of the skin around the wound carefully washed with warm water: adhesive straps and lint reapplied. Better diet ordered, consisting of oysters, soft eggs, and porter and water.

3 o'clock P. M.—Has taken moderately of the diet last directed, pulse 128, somewhat quicker, more tense.

9 o'clock P. M.—Some increase of pulse both int ension and volume. Skin not so moist. Bowels have been slightly opened. Continues the same diet. Is restless. Ordered acetate of opium, gtt. xx.

March 22d.—Sleep more disturbed last night than heretofore. Is now dull and inclined to sleep. Pulse 140, small and weak, with some fluttering. The capillary circulation of left arm exceedingly languid. Its temperature 93°. That of the right arm 94°. Ordered by Dr. G. carbonate of ammonia mixture and quinine, and the arm to be enveloped in wool. Same diet continued, but has no appetite. The erysipelatous inflammation spoken of yesterday, has increased. The hand is covered with purple spots, and its temperature somewhat less than that of the forearm.

3 o'clock P. M.—The pulse improved a little in strength; is more distinct, and not so fluttering. Has taken, since morning, carbonate of ammonia and quinine alternately, every hour. Diet continued, with wine whey. Discolouration of the hand increasing and extending to forearm, though the sensible heat about the same. Considerable determination of blood to the head, which is hot, attended by muttering delirium and increased restlessness.

9 o'clock, P. M.—Pulse improved, since morning, in distinctness and artificial strength—the result of the stimulating treatment. An increased determination to the head and delirium. Has recently taken gtt. xx. of acetate of opium, and ten more will be given in an hour. Ordered wine whey, freely, throughout the night. Temperature of the arm and hand preserved by warm flannel.

March 23d, 9 o'clock, A. M.—Has had a very restless night. Pulse more frequent, (160,) much smaller, thready, weak and fluttering, although the carbonate of ammonia, quinine, and whey have been continued. Heat of head and delirium aggravated. Hand and forearm more swollen, with increase of lividity. Cutaneous vessels greatly distended, and apparently in a state of congestion. Patient cannot distinguish one attendant from another.

4 o'clock, P. M.—Died.

(Signed) E. R. CHEW."

March 24th, 1 o'clock.—The parts having been previously injected, the dissection was commenced by Dr. Ashmead, in presence of Drs. Barton, Harlan, Jackson, Pennock, Temple, Hunt, Wragg, Bettner, Hall, Nott, Chew, Peace, Levert, Barker, and myself. It was soon found, however, that the injection was not sufficiently firm to enable the dissector to proceed in a satisfactory manner, and besides that the parts were so changed from their natural relations, as to require more time to be consumed in the investigation, than could be spared by most of the gentlemen present at the examination. On these accounts the dissection was postponed, until the afternoon, and then resumed by Drs. Ashmead and Hall, in the presence of occasional visiters. Dr. Hall not having been present, (owing to indisposition,) during the reduction of the dislocation, I was anxious that the dissection should be made, and the account of it drawn up by himself; and he has obligingly furnished me with the following communication:—

"*Philadelphia Alms-House, March 24th,* 1828.

"*Dissection of John Langton, sixteen hours after death.*—The left hand and forearm exhibited marks of incipient gangrene, extending only to the skin and subjacent cellular membrane, and terminated by a well-defined line at the elbow. The wound made by the operation was filled with an offensive sanies, and exhibited no tendency to healthy granulations.

"We threw in the cold lead injection, by fixing a pipe in the mouth of the left subclavian, through the aorta: the shoulder and neck were minutely injected, but as the radial artery was not filled, the pipe was introduced into it, and the lead driven upwards until a portion of the first injection was made to recede through the divided thoracic vessels.

"The arm, scapula, and clavicle, with a portion of the ribs, were separated from the body, and carefully dissected by Dr. Ashmead and myself, in the presence of the surgeons and house students. All the parts about the axilla were so blended by adhesions as to render their discrimination very difficult. The muscles were unaltered, except from extravasation and effusion to be hereafter noticed. The subclavian artery was healthy, the vertebral of its usual caliber, the internal mammary large; the inferior thyroideal, the posterior cervical, and the superior scapular arose by a common trunk from the subclavian, together with an anomalous artery, about the size of a crow-quill, which descended, between the subclavian and carotid, along the trachea; its destination was not pursued. The posterior cervical was of the size of a large quill, having its branch to the base of the scapula, much enlarged. The superior scapular artery ran along the upper edge of the subclavius muscle, and had escaped the operator's knife, though it had been made visible by the incisions. It inosculated beneath the neck of the scapula with the inferior dorsalis scapulæ, which was of the size of a crow-quill. From the unfavourable state of the part for dissection, we could not demonstrate the channels through which the blood to the arm passed, but that these existed, and would, under auspicious circumstances, have become adequate to the circulation, the course of the injection and other circumstances fully prove.

"As the injection from above had penetrated to the ligature, it is presumed that no coagulum had as yet formed. The ligature embraced the artery just where it emerges from beneath the scalenus anticus, and included no other part. The artery was uninjured, in all the space between the ligature and the point where it became adherent to the head of the bone, at the internal margin of the lesser tubercle. It was firmly attached to the substance of the bone and the articular capsule by dense cellular or ligamentous substance, *and such was the compactness of this juncture, and so short the portion of artery between this point and that of its attachment to the rib, that it seemed absolutely impossible to reduce the bone to its place and not cause the rupture of the vessel.* This effect was here exhibited. Where the artery adhered to the bone, its internal coats had been ruptured, with the exception of a very narrow band, immediately opposite to its point of attachment. The extremities of the artery had separated, as far as the band above alluded to would allow, (which was about half an inch,) and the artery, by tending to straighten itself, was only retained to the bone by the intervening portion of its external coat. The dilatation of the external coat had formed a sac, which was expanded by being stretched between the points of its attachment to the bone and the ruptured extremity of the artery. This true aneurismal sac extended beneath the artery towards the ligature, and beneath the pectoralis minor muscle, but was ruptured in its posterior portion, very near its adhesion to the bone, so as to have allowed the blood to escape and form a diffused aneurism. The blood had penetrated beneath the pectoralis major and minor muscles, and along the edge of the latissimus dorsi as far as the seventh rib. It had extended beneath the humerus, to the space between the long head of the triceps and the teres minor, and had filled the axillary cavity, but had been prevented from extending downwards, by the general agglutination of the parts, caused by the dislocation. Along the internal margin of the coraco brachialis and the deltoid, there was much extravasation, but we rather think it was caused by the means used to reduce the bone.

"The walls of the true aneurismal sac, were of so compact a texture, and its boundaries so well defined, that the conjecture of its having existed previously to the reduction of the bone, and that its rupture was a distant and subsequent event, is rendered probable.

"Upon exposing the articular cavity, the head of the bone was found to rest beneath its original socket upon a bed of dense ligamentous substance. The capsule was much thickened, and had a rupture in its inferior anterior portion, through which the blood and injecting matter had entered.

"About one-third of the lower portion of the glenoid cavity had been broken off, and remained attached to the superior part of the neck of the bone, by an adventitious adhesion.

"The greater tubercle of the humerus was cracked through its base, with the exception of the portion beneath its anterior facet. From the thickening of the periosteum, and the deposit of osseous matter, we do not think that this fracture was recent. The extremity of the acromion process was found fractured, but was still firmly embraced by the surrounding muscular and fibrous structure.

"It is proper to mention that the left ventricle of the heart was enlarged, and its muscular substance unusually soft. The right ventricle and auricles did not exhibit these phenomena. Upon opening that part of the subclavian, embraced by the ligature, the internal coats of the vessel were found completely divided, but no traces of a coagulum could be observed above the ligature, nor was there any vestige of coagulable lymph, or any approach to adhesion—though the ligature held its place with great tenacity, and the parts embraced by it seemed healthy.

"No other part was examined.

JAMES C. HALL, M. D."

Remarks.—A second time has it fallen to my lot to witness a rupture of the axillary artery, during the reduction of an old luxation of the humerus at the shoulder joint. The particulars of the first case, with remarks upon them, were formerly detailed in the seventh volume of the Philadelphia Journal of the Medical and Physical Sciences. It was there stated that the practice advised by Desault, and followed by most European and American surgeons, in cases of ancient luxations, was to employ extension and counter-extension to an almost unlimited degree, to rotate the limb in every direction, break up the adhesions and adventitious ligaments, and, in fact, to set no limits to violence and force rather than fail to restore the head of the bone to its original socket. With a view of illustrating this practice, emanating from a surgeon of almost unrivalled skill and reputation, the following quotation was made, and may be repeated in this place.

> "Previously to making extension," says Desault, "it is necessary to move the bone, *very forcibly*, in every direction, in order first to break the adhesions, to tear the condensed cellular membrane which serves as an accidental capsule, and to produce, so to speak, a second luxation with a view to make way for a perfect reduction of the first. The straps being then applied as in ordinary cases, serve the purpose of extension, for the accomplishment of which the number of assistants must be increased. Oftentimes the first efforts are fruitless, and the luxated head remains stationary amidst the *most violent efforts.* Let the extension then be discontinued. Renew the *forcible motions* of the limb: carry the humerus upwards, downwards, forwards, and backwards; *force the resistances* to give way; make the arm describe a large arch of a circle round the place which it occupies; let the rotatory motions on its own axis be impressed on it anew; and then recommence the extensions and let them be made in every direction. By these the head, already disengaged by means of the preceding *violent motions*, will be brought to a level with the glenoid cavity, and ultimately replaced."*

In addition it was stated, in my paper referred to, that Dr. Physick had, "in a variety of instances, succeeded after two and three months;" that the late Dr. Dorsey approved of Desault's practice, and followed it successfully in several cases—that Dr. M'Kenzie, of Baltimore, replaced a dislocated os humeri, nearly *six months* after its dislocation—that the same had since been accomplished by Mr. Kirby of Dublin—and that I myself had repeatedly reduced luxations at the shoulder, and some other joints, from two to four months standing, and that though in several instances the adhesions surrounding the head of the bone, and the new socket, were so considerable as to require great force and extensive laceration, not the slightest accident had ever occurred. I took the opportunity, at the same time, to remark, that there were very few cases on record, so far as could be ascertained, of injury, much less of death, resulting from the practice—that Desault had detailed the history of one case in which a large emphysematous or bloody tumour formed under the pectoral muscle immediately after the reduction was accomplished—that Mr. Charles Bell had mentioned an instance of rupture of the axillary artery and muscles, during the use of an ambe, and that in consequence the surgeons were obliged to amputate on the spot—that David, surgeon of the Hôtel-Dieu at Rouen, had reduced, after violent efforts, a dislocation of several months' standing, and that the patient lost his life from mortification of the whole arm.

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* Desault's Works, by Caldwell, p. 144.

Since the publication of these statements, however, I have met with others, among writers, of a similar character. Pelletan especially, in his Clinique Chirurgicale, alludes to several cases of the kind, and upon one of them makes the following remarks. "La tradition nous a conservé un fait de ce genre arrivé à l'Hôtel-Dieu il y a ù peu près vingt ans. On voulut réduire une luxation de l'humérus qui existait depuis quartre mois. Dans les violens efforts qui l'on fit pour y parvenir, il se fit un déchirement douloureux, et il s'éleva une tumeur volumineuse. On annonca que cette tumeur était emphysémateuse; mais des témoins oculaires m'ont rapporté que c'etait une crevasse de l'artere et un epanchement de sang: on en fit l'ouverture, et le malade mourut d'hémorragie."* In the eleventh volume of Johnson's Medico-Chirurgical Review,† there is a condensed account of several cases, "illustrative of the ill consequences which sometimes follow the reduction of dislocations," from the French of M. Flaubert.‡ The first case noticed is that of a stout sailor, of intemperate habits, and fifty-seven years of age, who entered the hospital of Rouen on the 13th of March, 1824, in consequence of a forward luxation of the humerus which occurred eleven days before. On the same day that the patient was admitted, an attempt was made by M. Leudet to replace the bone, in which, after two trials, he succeeded.

> "An enormous swelling followed almost immediately beneath the pectoral muscle. The face became pale and covered with sweat, the lips livid, and the pulsation in the radial artery ceased. 14th. The countenance was pale, the pulse small, hard and frequent. The swelling seemed to have subsided a little, but the limb was cold and of a purplish colour. In the axilla was a tumour,

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* Tom. 2d. p. 95.

† Page 452.

‡ Memoires sur plusieurs cas de luxation, dans lesquel les efforts pour la réduction ont été suives d'accidens graves. Par M. Flaubert, chirurgien en chief de l'Hotel-Dieu de Rouen, in Repertoire Général d'Anatomie et de Physiologie Pathologiques et de Clinique Chirurgicale, &c. &c. premier trimestre, cinquième numéro, 1827.

the pulsations of which were distinct to the eye, though not to the touch. It was now evident that *the artery was ruptured*, but the state of the parts around precluded any operation for tying the subclavian. On the 17th phlyctenæ appeared, and on the succeeding days, *gangrene* became developed. 25th. The fingers, elbow, skin of the axilla, and inside of the arm, are in a state of sphacelus; the pulsations of the tumour are more marked. 27th. A good deal of hæmorrhage from two openings situated a little below the armpit. Though the bleeding was arrested, the patient expired in the course of an hour.

"*Dissection.*—Hand and inside of the arm in a state of gangrene. The *pectoralis major was almost completely* torn across, and its fibres were separated by clots of blood. The upper portion of the short head of the *biceps* was *ruptured* also. All the muscles of the arm, shoulder, and outside of the chest, were infiltrated with blood. Between the pectoralis minor and latissimus dorsi, there was a large clot, on removing which, *the axillary artery was found to be fairly torn across*, a little above the origin of the subscapular. In order to discover the upper end of the vessel, it was necessary to dissect the *subclavian*, which was enlarged, as were the branches which arise from it. The *axillary* artery lay beneath the pectoralis minor upon the rib, to which it *adhered* by means of coagulable lymph. The end of the vessel was narrowed, and the thoracic nerves flattened. The second rib was depressed, its periosteum slightly absorbed, and the bone itself a little rough. The head of the humerus was somewhat flattened at the part corresponding to the rib; the capsule was torn, the cartilage rough and ulcerated in parts. The inside margin of the *glenoid cavity* was *fractured.*"

In the second case of dislocation into the axilla, reported by Flaubert, there was reason to believe that the axillary plexus of nerves was injured by the attempts at reduction. In the third case, (also a dislocation into the axilla,) the axillary nerves were found upon dissection to have been torn from the spinal marrow. Another case is related by the same writer, in which the reduction of a dislocation of the forearm backwards, was followed by great irritation, syncope, loss of pulse, enormous swelling, from which the patient narrowly escaped. A fourth case of luxation of the shoulder, attended by consequences nearly similar to those last mentioned, is also reported, and a fifth, (that of luxation of the hip,) in which it was doubtful whether the patient's death was caused by the accident or by the means employed to reduce the bone. Flaubert concludes by remarking, that "*surgeons either say less than they might about their mishaps, or that he alone had been unlucky enough to meet with all these unfortunate accidents.*"

It is not my intention to comment, except in a very brief way, upon the case of *Langton.* The particulars of it having been fairly and honestly stated, the profession will be able to draw its own conclusions. I may remark, however, that between the first accident of the kind I have detailed, and the second, (a period of five years,) I have reduced five luxations, each from two to four months standing—one in a patient of Dr. D. T. Coxe, upwards of sixty years old—another of Dr. Manuel E. Robinson, about the same age, and three more in my own practice, besides several similar accidents of a recent kind—all of which terminated in the happiest manner.

From these, and from many other cases of a similar character which I have treated within the last eighteen years, I think I have good reason to conclude, that where no adhesion exists between the artery and surrounding parts, the operation may be done with safety; that on the contrary, when adhesion does exist, (and of this we have no means to judge,) rupture of the vessel must be an inevitable consequence, whether the reduction be effected by force, or by the most gentle means. To show, however, that neither my colleagues nor myself, made use of unwarrantable force in the case of Langton, I shall present the following documents, obligingly furnished by some of the gentlemen present at the reduction.

"MY DEAR SIR,

"I was present when you reduced the luxated humerus of John Langton, assisted by Drs. John R. Barton and Harlan, on Saturday, the 15th inst. at the Alms-house Infirmary.

"On that occasion, the force employed was much less than I have repeatedly witnessed in the reduction of ancient luxations, and less could not have been used with any probability of accomplishing the reduction. The force was *gradually applied and long continued,* with the intention, as you expressly remarked to avoid the hazard of accident.

"I believe it to be very probable that the rupture of the axillary artery, in the reduction of long standing luxations of the humerus, has occurred in more instances than the small number on record. But unfortunately surgeons and physicians have seldom the candour or independence to acknowledge their failures or the unfavourable results of their practice, while the successful cases are sedulously blazoned forth to the world. This custom is analogous to the suppressio veritatis of a witness before a jury, and should be regarded as equally culpable, and leading to equally injurious consequences. A work exposing the hazards attendant on operations and the dangers of active medicines, illustrated with apposite cases, is a desideratum in the science, the execution of which would confer a most important obligation on the profession.

With great respect, yours, truly,

Dr. WM. GIBSON. SAMUEL JACKSON.

March 22d, 1828."

"PROFESSOR GIBSON,

"*Dear Sir*—Having learned that you intend to publish the case of John Langton, I beg leave to express my pleasure at the disclosure of an event likely to be so salutary to the interest of surgery. The condition of the parts connected with the dislocation, was not evidenced by any external signs, at the time when the reduction was attempted, nor could it be reasonably conjectured by any thing which appeared. The force applied was not irregular, ill-directed, or such as could have done *any* injury in that state of parts which usually follows a dislocation of the os humeri. The unexpected result arose out of circumstances beyond your control and insusceptible of detection; had it been otherwise, I feel assured that your surgical tact and cultivated skill would have discerned the lurking evil, and provided against the consequences.

Very respectfully, your obedient servant,

J. K. MITCHELL.

Philadelphia, March 28*th*, 1828."

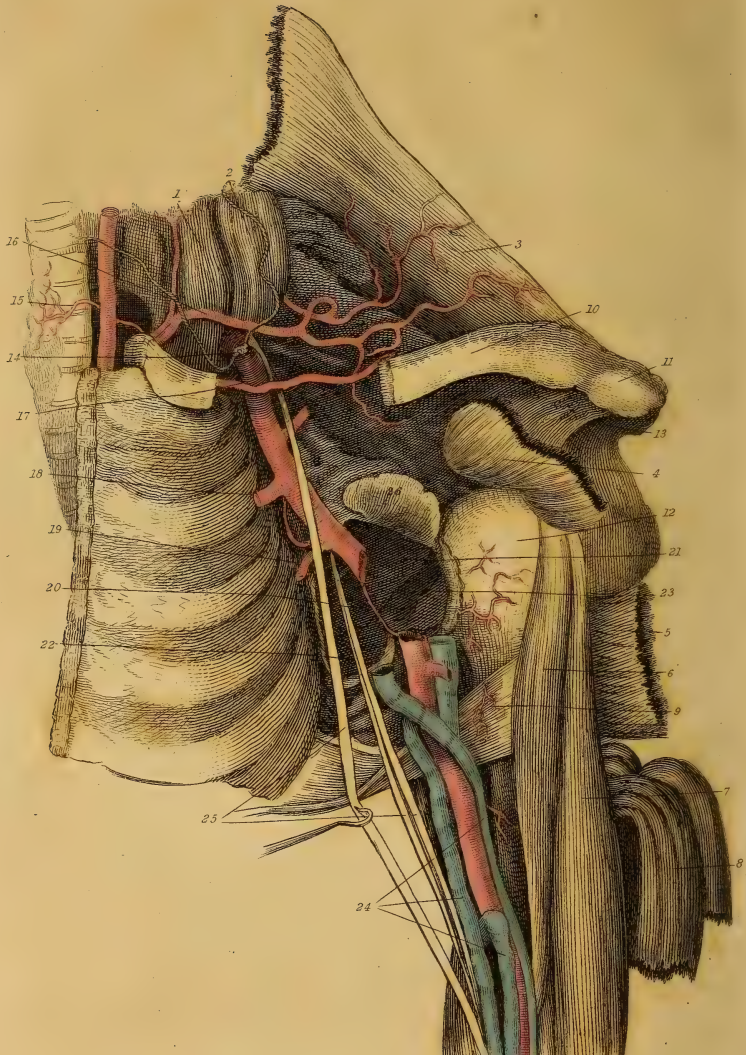
"We, the resident students of the Philadelphia Alms-house, certify, that as far as we are capable of judging, the utmost skill and prudence were exercised in the reduction of the above luxation.

"The patient was bled, purged, and kept on barley water alone for four or five days previous to the operation. About one hour and three-quarters were taken up in the attempts at reduction; during this time he was bled copiously, took large doses of tartarized antimony—was placed in every position which could promote success—and extension and counter-extension were made in the most gradual manner. The rotatory motions, necessary for breaking up the adhesions, were also made with the greatest caution.

Signed HENRY S. LEVERT. JOSIAH C. NOTT, M. D.
JOHN B. TUFT, M. D. EDWARD R. CHEW.
GEORGE S. BETTNER, M. D. JOSEPH PEACE."
WILLIAM ASHMEAD, M. D.

My former paper on rupture of the axillary artery was concluded in these words:—"A question may possibly arise—whether surgeons should be influenced, by the event of the case I have detailed, and by those I have quoted, and deterred altogether from attempting reduction in dislocations of long standing, or whether the established practice should still be continued, unaffected by fortuitous circumstances or contingencies neither to be foreseen or controlled? To the latter proposition I have no hesitation to give unqualified assent, and to declare, that should a case similar in appearance to that of James Scofield again occur, I shall feel justified in adopting a similar course." Such a case has occurred, but unfortunately, with a result that could scarcely have been anticipated, either by myself or coadjutors. If the question were again presented, I should answer it, I think, in the following way. If the patient is young, not very muscular, the luxation not complicated with fracture—if no attempts have previously been made to accomplish the reduction, and the head of the bone has not been out of its natural situation beyond five or six weeks, I should advise the attempt to *replace* it. But, on the contrary, if the patient is very robust and vigorous, advanced in years, accustomed

PL. II, vol. 2.



Drawn from Nature by J. Drayton

F. Kearny Sc

to labour and to the free use of ardent spirits, and the head of the bone has been long out, I should discountenance any attempt at reduction. In conclusion, I shall merely observe, that the fractures of the acromion process, of the greater tubercle of the humerus, and of the lower portion of the glenoid cavity occurred, in all probability, either at the time of the accident, or during the attempts made in the country to reduce the bone—and that the snap so distinctly heard the moment before the head of the bone was restored to its socket, arose, beyond doubt, from the lower fragment of the glenoid cavity being but imperfectly united and broken up again by the extension and counter-extension.

EXPLANATON OF THE PLATES.

Pl. II. 1. Scalenus anticus.
2. Scalenus medius.
3. Trapezius.
4. Pectoralis minor.
5. Pectoralis major drawn from beneath the biceps.
6. Coraco brachialis.
7. Biceps.
8. Deltoid.
9. Tendon of latissimus dorsi.
10. Clavicle, a portion removed.
11. Acromion.
12. Head of the humerus out of its socket.
13. Glenoid cavity of the scapula.
14. Subclavian artery, coming from beneath the scalenus muscle, with the ligature around it.
15. Inferior thyroid artery.
16. Posterior cervical.
17. Superior scapular.
18. External mammary.
19. Subscapular.
20. Band formed by remaining portion of the two internal coats of the anterior, and connecting the divided extremities of the vessel.
21. Cavity of the aneurism.
22. Anterior part of the aneurism.
23. Rupture of the sac.
24. Basilic vein and venæ comites.
25. Brachial nerves.
26. Part of the sac turned upwards.

Pl. III. fig. 1. *a.* Acromion process of scapula, with fissure through it.
b. Glenoid cavity.
c. Inferior part of the glenoid cavity broken off, and attached by a ligament to upper part of the neck of the humerus.
d. Greater tubercle of humerus fractured through its base.
e. Head of the humerus.
f. New socket in which the head of the humerus rested.
g. Part of capsule of the articulation.

Fig. 2. Improved cannula with its stilet—Perspective view.

Fig. 3. Side view.
a. Handle.
b. Silver cannula.
c. Stilet, formed of watch-spring, with an eye at one end through which a ligature is passed, and with a silver head at the other made to fit accurately to the end of the silver cannula. The needle is pushed some distance through the blade so as to give a better view of it.
d. Screw by which the stilet is retained firm in its place.

PL. III vol. 2.

Fig. 1.

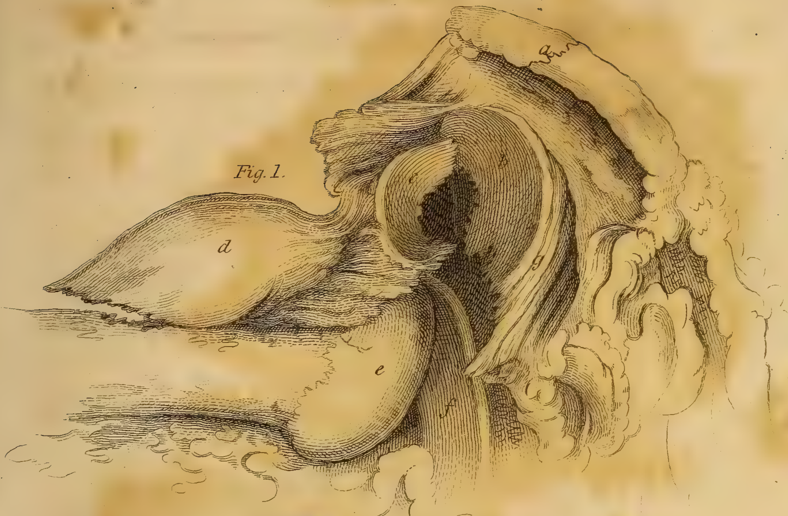


Fig. 2.

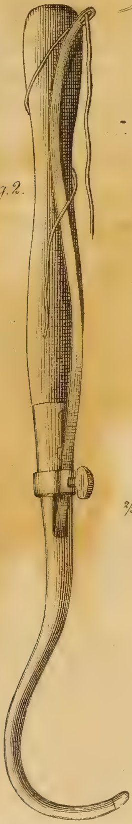
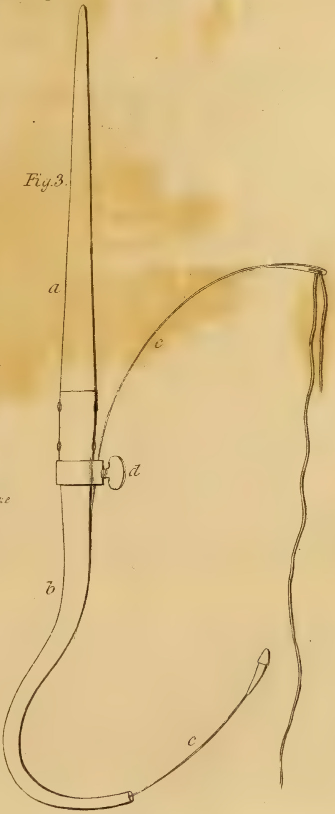


Fig. 3.



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Drawn & Eng'd by J. Drayton.

REVIEW.

Art. XIII. *De la Non-existence du Virus Vénérien, prouvée par le raisonnement, l'observation et l'expérience; avec un Traité Théorique et Pratique des maux Vénériens, rédigé d'après les principes de la Nouvelle Doctrine Médicale.* Par L. F. R. A. Richond Des Brus, Du Puy, (Haute-Loire,) Docteur en Médecine de la Faculté de Paris, Ex-Chirurgien aide-major a l'Hopital Militaire de Strasbourg, Associé Correspondant de la Société Royale de Médecine de Bourdeaux, de celles de Toulouse, Metz, Strasbourg, et Correspondant de la Société des Sciences, Arts et Agriculture d'Agen. A Paris, 1826. Vols. II. 8vo. pp. 1451.

[Continued from the last Volume.]

THE believers in the specific nature of the venereal virus, have always considered it a matter of primary importance, to designate accurately the period and manner of its entrance into the system; but though they have exhausted all their ingenuity on the subject, no essential light has been thrown upon it, nor have they been able, with all their scrutiny, to detect any positive signs by which the entrance of this poison into the system can be ascertained. Some have supposed that it was effected during the time of connection, and consequently looked upon gonorrhœa, buboes, and ulcers, as evidences of an infection already general. Consistently with this notion of immediate absorption, its advocates think the general treatment always indispensable. Some, indeed, persuaded that the great object of the practitioner should be to chase out and destroy the virus, by way of providing outlets for it, recommend measures calculated to increase the gonorrhœal discharge, and encourage the suppuration of buboes and ulcers.

Others have supposed that the virus is introduced under the cuticle, where it occasions an inflammation of greater or less intensity, and that after an indefinite lapse of time, it directs itself towards the internal parts.

"After this theory," says M. Richond Des Brus, "some physicians have thought that they might remove the disease entirely, and protect the system from infection, by sacrificing the diseased part. For this purpose some have proposed the extirpation of the seat of disease with a cutting instrument, others the cauterization of the ulcer on its first appearance, either by the aid of fire, or of very active caustic substances. What has been the result of these painful practices?

With the greatest number of patients the wounds have inflamed, buboes have been produced, and serious results followed. But, too blind to discover that these phenomena depended upon the irritation produced by their treatment, these physicians have concluded from them that the means had not been sufficiently active for the destruction of the virus, which in their efforts to repel, they have caused to fix itself in the inguinal glands. They have therefore had immediate recourse to mercury as a remedy for the general infection, which they conceive the appearance of the buboes to announce, and all the subsequent mischief has been attributed to the virus."

In support of his position, the author has brought forward with much effect the well-known experiments of Bell, the results of which it will be recollected, were, that out of ten cases where caustic was applied to chancres, all but two were affected with buboes, whilst in ten others, five of which were treated with mercurial ointment, and five with simple cerate, only one was attended with bubo, and that case occurred among those treated with the *mercurial ointment.* On another occasion, having used cauterization in twenty-four patients, buboes occurred in twenty. Swediaur, who with Hunter, thinks that the primary symptoms of syphilis may exist independently of a general infection, disapproves of the employment of caustics, for the following very curious reason—that the virus pent up under the eschar they occasion, and unable to make its escape, is forced to retreat, and direct itself towards the interior parts. To avoid this, as he supposes, very great inconvenience, he recommends recourse to local mercurial applications, by the aid of which he thinks the virus may be engaged and *neutralized.* Such practice, however accordant with the belief in a specific venereal virus, and the neutralizing power of mercury, is not, according to our observation, as satisfactory in its results as could be desired.

The adoption of measures calculated to procure the evacuation of the venereal virus from the system, or to neutralize and render it harmless, constitute the basis of what is termed the *precautionary treatment*, a system of practice which perhaps has done more injury than would have arisen from the worst forms of syphilis, left without any artificial interference.

Our author, as might be expected, does not suffer a practice so much at variance with his own views, to pass unnoticed. Adverting to the inconclusive, but often quoted, experiments of Harrison, who, having triturated together venereal pus and mercury, could not produce the venereal disease by inoculating with the compound, concluded that the mercury had robbed the matter of its virulency, M. Des Brus observes, that they do not substantiate the affinity said to subsist between mercury and the poison, since inoculation with venereal pus *not neutralized* but pure and unmixed, made by BRU, HUNTER, BERTIN, DUBLED, and himself, were without effect.

"We would further observe," says he, "that if the mercury acts by virtue of its affinity, and not, to use the expression of M. Lagneau, as an ordinary stimulant, it ought to be particularly efficacious when applied to the diseased surface, since attraction operates with so much the more activity as the distance which separates the bodies is diminished; on the contrary, experience has taught that mercurial applications are dangerous when applied upon ulcers that are recent, inflamed, and painful; whilst used upon those which are hard and indolent, they show their curative powers in common with other stimulants."

The belief that the virus can remain inactive in the body, and yet preserve its active properties, our author treats in such terms as these:—

"Experience teaches incontestibly, that affections regarded as venereal, have their seat most commonly in the mucous or lymphatic tissues. But is this fact sufficient to make us conclude that during the time which elapses between the supposed penetration of the virus into the system, and the appearance of the *consecutive* symptoms, it may remain fixed in these parts? I think not. What is of most consequence is to know how, with the qualities with which it has been endowed," (acrimonious, corrosive, &c.) "it can remain inactive in those parts. In effect, it is so great an irritant, says Astruc, 'as to produce upon the parts which it touches, *redness, tension, and pain*, in a word, *phlogosis* or inflammation,' and nevertheless once admitted into the system, it respects the organs which receive it! It circulates with the blood, and may be carried with this fluid through the course of the secretory organs, without ever being subjected to their action! Like all foreign substances, it shall be exposed to the action of the absorbing powers and yet not have its principles modified, whilst bones, balls of lead, and even stones, yield to them! In spite of the processes of composition and decomposition incessantly going on, it alone shall remain invulnerable and inaccessible to all the agents of life! It would really seem as if all reasoning and judgment had been laid aside, whenever the subject of syphilis has been agitated."

In opposing the belief in a general infection of the system arising from the dispersion of the *virus* through the humours to different parts, M. Des Brus pays a just tribute to an English author, whose writings upon this subject, notwithstanding the incorrect notions they embrace, are still to be accounted most valuable.

"Hunter," says he, "whose views have been much clearer than those of other authors, and whom I consider to have approached nearest the truth on this point, has been perfectly sensible that it was ridiculous to admit of a general infection of the system in the case of an individual, who, with the exception of a tetter, ulcer, or excrescence, was otherwise in good health; and, although admitting the existence of the syphilitic virus, and its transmission into the humours through divers passages, he has not believed that the appearance of the *consecutive* phenomena was owing to the actual presence of such infectious matter in the parts affected. According to him, the virus in its passage through the body, disposes various parts to take on the venereal irritation; and this disposition succeeds the venereal action sooner or later, according to the excitability of the part, its seat, and the order of its susceptibility for the virus. Furthermore, he thinks that the various phenomena produced by this venereal action, are *local,* may be cured by means applied *directly* to the part, and that the pus which they form is not *virulent.* We have already cited some of the experiments made by this great physician. They prove that inoculations made with the pus collected from suppurating pustules, and ulcers of the tonsils, are without effect; whilst that formed from acute inflammation of the genital organs exhibits activity; which depends, as we have already explained, from the circumstance that the pus produced by a chronic inflammation, for that reason only, is less of an irritant. We will subjoin a passage from that author in further support of his opinion upon the subject of *infection,* as it agrees with our own."

"It has been supposed," says he, "that even all the secretions from the contaminated blood could be affected so as to produce a like poison in them; and as the parts of generation are thrown in the way of receiving it, when fresh contracted, so they still lie under the censure of having it returned upon them from the constitution. Hence, it has been supposed that the testicles and vesiculæ seminales may be affected by the disease; that the semen may become venereal, may communicate the disease to others, and, after impregnation, may even grow into a pocky child; but all this is without foundation; otherwise, when a person has the lues venerea, no secreting surface could be free from the state of a gonorrhœa, nor could any sore be other than venereal. Contrary to all which, the secretions are the same as before; and if a sore is produced by any other means in a sound part—that sore is not venereal, nor the matter poisonous, although formed from the same blood."

Nor is this the only point of agreement between our author and the great physician, whose authority has been just cited. In fact M. Des Brus appears to have been greatly assisted in the course of his investigations by the previous researches of Hunter, who, he regrets, after having promulgated so many true opinions, should have permitted himself to be drawn aside by the prevailing notions of the times, so as to be prevented from entirely overturning a theory, the little solidity of which he was often obliged to acknowledge. With due allowance for his belief in the existence of a specific poison, how nearly do the views of Hunter, as expressed in the following passages from his work, accord with the present physiological doctrines. Treating of the effects of the poison, he says—

"The general effects of this poison upon the constitution, are similar to other irritations, either local or constitutional. It produces fever, which is of the slow kind; and when it continues a considerable time, it produces what is called a hectic disposition, which is no more than a habitual slow fever, arising from a cause which the constitution cannot overcome. While this exists, it is impossible that any thing salutary can go on in such a constitution."

After describing the immediate and successive symptoms, he observes:

> "There are also a number of local appearances mentioned by authors, which I never saw, such as the fissures about the anus, &c. There are also a number of diseases described by authors as venereal, especially by Astruc and his followers, which are almost endless. The cancer, scrofula, rheumatism, and gout, have been considered as arising from it, which may be in some measure true; but they are with them the disease itself, and all their consequences, as consumption, wasting from want of nourishment, jaundice, and a thousand other diseases, which happened many years before the existence of the lues venerea, are all attributed to it. There is, even at this day, hardly any disease the practitioner is puzzled about, but the venereal comes immediately into his mind; and if this became the cause of careful investigation, it would be productive of good, but with many the idea alone satisfies the mind."

How extremely just and generally applicable is the concluding remark of the above quotation.

M. Des Brus has devoted a long chapter to what have been reckoned the diagnostic symptoms of secondary syphilis, in the course of which he has attempted to show that these are less to be depended on than those reckoned among the primary. Many of his observations upon these subjects, lead us to believe that he has carried his incredulity too far in denying the agency of the syphilitic irritation in the production of various affections, which, if not always dependent upon it for their development, we have found most frequent attendants. He thinks with Hunter, that a crowd of affections reckoned as venereal by Astruc and others, are foreign to that disease.

> "I believe it would be useless," says he, "to prolong these considerations: the reader will be able to see that I have sought with care and fidelity after all that authors have said relative to diagnostics. He will be able to convince himself that no one of the small number of symptoms which they have given as characteristics, is capable of proving the justice and necessity of the distinctions which they have established, and to conceive the perplexity in which a young physician would find himself, who, with the classic authorities in his hand, attempted to designate with precision the affections, the treatment of which had been confided to him. He would, in fact, be able to see, that besides the spots, the pains and syphilitic ulcers, for which they have endeavoured to give some distinctive signs of no value, they have preserved silence with regard to all other affections, abandoning their diagnosis and treatment to the medical tact of each practitioner."

M. Des Brus has given an interesting history of the various remedial agents which have at different times been esteemed efficacious in the treatment of syphilitic affections. The first physicians who have left accounts of their practice thought only of depurating and expelling the vitiated humours, for which purpose they chiefly employed bitter drinks, heated apartments, bleeding, &c. The history of the employment of guaiacum is too well known to require any thing to be said of it here. The salutary operation of this article, M. Des Brus attributes to the strong excitement induced by the large quantities of the warm decoction usually administered. This excitement was further increased and kept up by the administration of purgatives. All these acting by revulsion upon the irritations fixed in other parts, changed the direction of their fluids and impressed upon the organs a different action from that occasioned by the disease. It is, he thinks, almost always through an impression of greater or less force, and by an increased action of some organ or system of organs, that the divers remedies employed have proved efficacious; they effect a revulsion. But that this mode of treatment may be successful and free from danger, it is essential that it should be regulated by favourable circumstances, without which it may be attended with serious rather than beneficial effects.

In the course of his observations upon the various articles of the vegetable kingdom which have at different times been esteemed for their antisyphilitic virtues, and some of them even held superior to mercury itself, M. Des Brus takes notice of those much famed nostrums, the syrups de Cuisinier, de Velno, and the rob de Lafacteur. These, he says, do not, as their venders would fondly have it believed, possess any specific virtues, containing nothing in addition to the decoction of the woods, except a few aromatic or laxative substances, the syrup de Cuisinier only differing from the others in having usually a little corrosive sublimate added to it. But as long as the doctrine of specifics is maintained, so long will the profession be annoyed by the encroachments of charlatanry. It is easy to convince those who believe in the specific nature of a disease that some one remedy is peculiarly adapted to its cure, and until this remedy be found, the field for imposition must remain open. When the reign of sound reason and general principles becomes fairly established, then, and not till then, will a specific be found for quackery.

With regard to the advantages to be derived from the ordinary vegetable decoctions, he expresses himself as follows:—

> "I believe that when pustules of the skin, glandular engorgements, or affections of the bones exist, and especially after mercury has been employed, the lymphatic vessels, white tissues, etc. are in general over-excited, and that every substance which, like mercury, tends to augment this excitement, will prove injurious. It is under these circumstances that the vegetable prepara-

tions are useful, by giving activity to the sanguiferous system, tone to the whole economy, especially to the mucous membranes, and by restoring the equilibrium which had been destroyed. It is in the same manner that bitter drinks, nutritious aliments, and *insolation* operate in curing scrofula: a revulsion in these cases is determined from one system upon another; a therapeutic excitement is opposed to a morbid action, both, however, operating upon different parts. Perhaps too, it must be admitted, that these substances often only act in a negative way; that is to say, by preventing the administration of substances which might aggravate the disease, and in leaving the cure to be effected by time."

We would invite the special attention of the reader to the concluding sentence of the last quotation.

M. Des Brus, in speaking of the ancient employment of purgatives in the treatment of venereal affections, cites the names of many distinguished authors who employ them. As a true disciple of the physiological school, he does not doubt their efficacy, not however upon the principle of expulsion or purification of the blood and humours. It is only, he thinks, through the disturbance which they occasion in the system, and by the revulsion they operate upon the mucous coat of the intestines that they prove serviceable.

Possessing no positive idea of the nature of the disease, and not satisfied with the success attending the modes of cure already in use, which, judging from the fatality and serious consequences so often mentioned by the older physicians, must have been singularly injudicious, it is nowise surprising, that when a powerful agent, such as mercury, was proposed as a sovereign remedy for syphilis, it should have been employed with an eagerness proportioned to the necessity of the occasion. The ordinary effect of salivation, perhaps first suggested the idea of its fitness for the expulsion of vicious humours, and was certainly well calculated to impose such a belief upon the believers in the humoral pathology, then the prevailing doctrine of the time. The mercurial practice once adopted, was for more than three centuries, universally believed to be not only the best, but the only means of curing syphilis—and the evil effects often produced by the remedy were always charged upon the disease. Salivation alone was thought able to exterminate syphilis, insomuch, that it required strong nerves and a good stomach to be able to enter the wards of an hospital appropriated to the treatment of this disease, where the poor patients lay with sunken and cadaverous features, enveloped in an atmosphere surcharged with the most offensive exhalations. None but such as were blessed with adamantine constitutions could be expected to live for weeks and months exposed to circumstances so little congenial to life. For the reality of this picture it is not necessary to look back many years, nay, even at the present day we are assured the original may be found.

In the year 1778, CHICOYNEAU, Chancellor of the University of Montpellier, ventured publicly to maintain, that syphilis could be cured without salivation. The employment of the liquor of VAN SWIETEN, which had come into extensive use, and was often administered without inducing salivation, tended very materially to confirm this new belief, and to lessen the evils attendant upon the usual mode of treating venereal affections. The way to improvement thus opened has been successfully followed, and of late years it has been shown by the extensive observations of THOMPSON, GUTHRIE, ROSE, CARMICHAEL, and others, that neither salivation, the liquor of Van Swieten, nor any other mercurial preparation was indispensable to the cure of syphilis.

The celebrated PEYRILHE, has left strong testimonials in favour of the volatile alkali as an antivenereal. Convinced that a variety of substances, other than the mercurials, might be advantageously employed against syphilis, he made trials with many, and eventually fixed upon the article just mentioned, as superior to all others.

Under the impression that the efficacy of mercurials in curing venereal complaints is in proportion to their greater or less oxigenation, and that oxigen was in fact the principle upon which their sanitive power mainly depended, many physicians have been led to use acids as affording the most abundant supply of this simple substance. The nitric and citric acids have been chiefly used with this intention. SCOTT, an English practitioner residing in India, has given the former the preference to mercury in many cases; and physicians in other countries have proclaimed its success. An oxigenated pomatum, composed of lard and nitric acid, has been highly recommended, especially against syphilitic eruptions. Opium, preparations of gold, &c. &c. have likewise been employed by physicians as antisyphilitics. In taking into consideration the number of articles of different qualities which have been recommended for this purpose, M. Des Brus thinks that their virtues, like those of mercury, have been sometimes estimated upon the principle so often groundless, *post hoc, ergo propter hoc.* That in fact the diseases have either been removed by some other agent not noticed, or got well of themselves. "Upon the same principle," says he, "I might if I chose, ascribe all the cures which I have obtained by the aid of a rational treatment, to sugar, since nearly all my patients used it in frictions upon the tongue."

M. Des Brus, after citing many evidences of the efficacy of regimen, country air, and exercise, alone, in curing patients, even when the reputed specifics have failed, thus concludes his chapter upon the various antisyphilitics:—

> "From the facts mentioned, it is demonstrated, that depuratives, sudorifics, purgatives, the volatile alkali, all the preparations of mercury, the nitric, nitrous, and citric acids, oxigenated pomatum, opium, gold, spare diet, exercise, and country air, are efficacious in curing the venereal disease. If all these means have produced incontestible cures, it must appear evident, that syphilis cannot be a *specific* disease, because it is not, as Astruc has pretended, indestructible by any other remedy than mercury, and because there is no truth in the observation of the same author, that in this affection nature acts only to destroy. If they have not proved always advantageous, it is evidently because the disease is not, as some would have it believed, the same in all cases and with all individuals. Numerous circumstances, relating to the seat of disease, its intensity, duration, and disposition in particular individuals, occasion different results even when the same remedies are used; and these circumstances are equally influential in cases of the venereal disease. Upon the whole, the efficacy of all these remedies, had they only been observed in *a few cases*, would appear to me to prove that *the disease is not specific.*"

Our author's inference, that diseases which yield to different remedies or get well by the unassisted powers of nature, ought not to be regarded as *specific*, will not be considered as quite tenable in the present state of our knowledge, as several diseases which must be considered as specific, if there *are any* such diseases, get well under various modes of treatment.

The views entertained by Hunter of the modus operandi of mercury in the cure of syphilis, are in exact accordance with those held at this time by the followers of BROUSSAIS. Hunter believed that mercury acted by producing an irritation in the system, different from that of the disease. He thought, moreover, that if a constitutional irritation could be raised without danger, such as is often produced in local affections, the venereal disease might perhaps be cured in one-fourth the time usually required. M. Des Brus regards the opinion of Hunter upon this subject as far more rational than any other. "It is," says he, "the expression of facts, and does not chill the reason: it is likewise generally adopted now by the well-informed and unprejudiced." The celebrated Lagneau thus expresses himself upon the subject.

> "This *stimulant* property of mercury manifests itself by phenomena so evident, that it cannot be doubted. Fulness and frequency of the pulse, hæmorrhages, thirst, excitement of the whole body, a greater or less increase of some one of the secretions, ordinarily attend its administration. These effects, the development of which is essential to the cure, may be maintained as long as is requisite, if care is taken to manage the patient in such a way as to preserve him constantly in a state of uniform vigour."

Had M. Lagneau gone no further with his explanations, he would, in our opinion, have done well. But being a believer in the existence of a virus, he has undertaken to explain the manner in which it is evacuated, which he thinks happens generally during the almost insensible crisis of the mercurial febricula: a hypothetical explanation by no means satisfactory.

Sudorifics, the muriate of gold, the volatile alkali, purgatives, the rob of Lafecteur, etc. etc. all operate, according to M. Lagneau, by producing an excitement, either in the intestinal tube or other tissues of the body; it is in the same manner that excessive exercise and employment in the country prove efficacious. If mercury is more frequently serviceable than these, it is, he thinks, only from the more uniform distribution of its influence upon all the organs and the property it possesses of maintaining its action longer than other agents.

> "I doubt not," says M. Lagneau, "that all substances capable of producing this increase in the vitality of one or more systems, whatever they may be, would be equally efficacious. It is on account of its stimulant quality that iodine is sometimes useful, and that by its means I have cured venereal affections. I believe, therefore, with Peyrilhe that it is not of so much consequence as it at first appears, whether we make use of this or that means. The great object is to effect an increase in the motions of the solids; it is requisite to produce and keep up a febrile excitement, and even in some cases fever itself; it is necessary to stir up the preserving principle."

In confirmation of this doctrine, M. Lagneau observes, that among the great number of medicines proposed for the cure of syphilis up to the present day, the greatest success has attended the use of those best adapted to produce excitement by their stimulant properties. The following paragraph of our author is so replete with the spirit of the new or physiological doctrine, that we give it entire—after which we shall add a few parallel passages from the work put forth by the chief of the school himself.

> "When we become acquainted," says M. Des Brus, "with the important influence exerted by the stomach over the mechanism of life, together with the exquisite sensibility possessed by its interior lining membrane; when we know by what strict links it is united to the different parts of the body, we may conceive of what importance it ought to be for the practitioner to have his attention always fixed upon it whenever he applies to it any thing stimulating. If this organ is injured by some one of them, it in fact determines the consequences, and prevents the good effects which might otherwise attend its use. It is for want of that light which M. Broussais has given us upon the irritations of this important organ, that our predecessors often experienced unexpected disappointments; that they so frequently met with *adynamic* fevers, during the progress of which gangrene manifested itself upon buboes and ulcers; that after a mer-

curial course, their patients exhibited for a long time an altered physiognomy, paleness, weakness of digestion, and pains, and that they were affected during the use of mercury with a variety of complaints. As often as we would wish to effect the cure of a disease by revulsion, we should proceed with prudence, and understand perfectly the operation of the medicines we employ upon the parts to which they may be applied."

The following propositions in relation to this subject, are furnished by Broussais.

"Mercury, sudorifics, and other *stimulants*, only cure syphilis by exercising a revulsion upon the depurating capillaries, (or other parts,) but it is necessary that this effect should be seconded by abstinence: for a too copious sanguification favours the syphilitic irritation."

"The stimulants called antivenereal, ought to be administered internally with a good deal of caution; otherwise they develope gastro-enteritis, which reflected upon the exterior syphilitic irritations prevents the revulsion; or the irritation fixing upon the viscera ends in their disorganization."

"When the stimulants called antivenereal, have occasioned a gastro-enteritis and syphilis is not yet cured, it can only yield along with the gastro-enteritis, to a long perseverance in the antiphlogistic treatment; but if the gastric viscera are disorganized, or the patient is too much enfeebled, the cure is impossible."

"Gastric phlegmasia, occasioned by the abuse of antivenereals, are easily transferred to the lungs, and if the antiphlogistic treatment is not resorted to promptly, phthisis will be the consequence."

"Subjects predisposed to gastritis ought to be treated for syphilis by antiphlogistics, both externally and internally administered; for if they be stimulated through the first passages, these become over-excited, and thus it sometimes happens that syphilis is not cured."

That syphilis can be cured by the employment of antiphlogistics and emollients alone, M. Des Brus furnishes very numerous proofs drawn from the records of his own practice, but we think these cannot be called for on the present occasion, since the evidence furnished by practitioners in our own country, affords ample testimony to the same effect. He very properly insists upon the great importance of abstinence, and the use of light and simple food in the treatment of venereal complaints, which being often seated in parts having a strong connection with the stomach, are frequently aggravated by a too strong excitement of this organ. Where, on the contrary, privations from food have been imposed, or the use of mild drinks prescribed, the irritation, far from being increased, has been diminished by the sedative effects of this regimen, and nature unclogged in her operations has triumphed over the disease. M. Des Brus concludes that there are two distinct plans of curing syphilis:—The first by sedatives of all kinds, antiphlogistics, &c. The second by stimulants, through means of which a revulsive operation is produced.

He has given a very candid statement of the particulars of many cases cured by mercury, and as an objection to this mode of treatment, represents it as generally more tardy than the rational plan. He does not deny, that in a multitude of patients the cure is effected with great rapidity. But in these, he says—

> "It is necessary to consider whether the mercury be the cause of the cure; for numerous cases have taught me that cures are effected quickly without this metal. I am at all times willing to admit, that it may sometimes be useful through the revulsion which it produces upon the organs, and the general excitement which it occasions may likewise prove favourable, especially in the case of chronic ulcers attended with slight pain, &c. But I repeat again, my belief, that even under these circumstances a well-directed local treatment would at least be equally efficacious."

M. Des Brus reports the particulars of four cases, which tend to prove, that the tincture of iodine sometimes exhibits greater powers as a *specific* in the cure of buboes than even mercury. In the first case, the bubo was of a chronic character, and existed after the removal of other local symptoms, for which the mercurial treatment had been used. He prescribed a drachm of the tincture of iodine, which the patient was directed to rub himself with carefully. In about four days he thought he observed a subsidence of the swelling, and in ten the cure was complete. In the second, there were two large and hard buboes, which had made their appearance on the twelfth day after the disease manifested itself, one of which suppurated after the commencement of a most active mercurial treatment, consisting internally of the liquor of Van Swieten, and externally of frictions to the number of twenty. In addition to the frictions with one drachm of the tincture of iodine, he administered the same medicine in doses of five drops, how frequently he does not inform us. The subsidence went on gradually, and towards the twelfth day the cure was complete.

> "At this time," says he, "the patient experienced a swelling on the right side of the nose, ulcers manifested themselves upon the pituitary membrane, and the whole nose soon became tumefied, red, and painful. A few days afterwards, yellow crusts exhibited themselves upon various parts of the face and trunk. The passage of the air through the patient's nose was entirely obstructed; four leeches were applied, emollient fumigations and baths were employed and the cure was soon complete. How many physicians might have recognised in these last symptoms the indications of an infection of the humours, and would have hastened to recommence with the precious specific, without thinking of its inefficacy against the buboes."

In the third case, buboes, one in each groin, having suppurated, during a mercurial course applied both externally and internally, still remained hard and indolent. Recourse was then had to frictions with the tincture of iodine, together with doses of the same medicine to the extent of fifteen, twenty, and even thirty drops. At the end of seven or eight days the effect was already considerable, and a complete cure was soon effected.

After an enumeration of many cases from his own observation and that of others, in which the results of the mercurial treatment both internally and externally applied, were not only ineffectual in curing venereal complaints, but manifestly pernicious, M. Des Brus indulges in the following observations:

"When we examine with an unprejudiced spirit, the kind of treatment which has been followed, and the complaints against which it has been directed, we cannot help deploring the blindness of physicians, who are entirely subjugated by these two opinions: that all these complaints are occasioned by the virus and that mercury neutralizes it. They appear inattentive to the phenomena which succeed each other, to the effects of remedies, to the aggravation of the affections, and only abandon inefficacious mercurial preparations, to employ others of greater activity, and of course still more dangerous. The disease triumphs; new affections manifest themselves, and the system, shaken by so many sad shocks, becomes in the end entirely deranged. To the acrimony and tenacity of the virus, they now impute the prostration of strength, the alteration of the organic tissues, the derangement of the functions, and they find, in the death of a subject which perishes a victim to their blindness, a pretext for declaiming against that dangerous matter, and for recommending to their pupils greater activity in the treatment to be pursued. It is owing to similar circumstances, that Astruc and his disciples have considered all diseases and every kind of affection, as capable of being venereal, and been conducted to consequences altogether opposite to those which might be reasonably deduced. This, unfortunately, will always be the case, until this hitherto neglected branch of the healing art, shall be enlightened by the torch of physiology. What would we say of the physician who should continue the same remedy, notwithstanding the increase of the disease, and the conviction that he was the cause of it? He would be treated as a blind routinist. But when syphilis is in question, the like manner of proceeding is styled sagacity, and obstinacy in following a similar mode of practice, regarded as rational, as justified *by experience.* Alas! with how much reason has Moliere said—

Les hommes la plupart sont etrangement faits,
Dans la juste nature on ne les voit jamais.

They forget this grand precept, *si juvare non potes, saltem ne noceas;* and clinging to the opinions of others, suffer themselves to be drawn into the use of empirical modes of practice, the danger of which they would soon discover, if their reason were free, and their eyes not fascinated."

The subject of hereditary syphilis is one of considerable interest, and, like most other points connected with our topic, has given rise to great contrariety of opinion, and to the propagation of many errors. Some have maintained that syphilis can never be transmitted from the father or even the mother, to the fœtus in utero, whilst others have admitted that it may not only be communicated in this way, should either parent labour under the disease, but that an infant may receive the germ of disease, and preserve it for many years, even when both parents have been for a long time perfectly well, provided that either of them had previously been affected with any primary symptom of syphilis. Some pretend that the inoculation takes place at the moment of conception; others that it is subsequently transmitted through the blood of the mother. Many believe that contagion can only be imparted during the birth of the infant, by the mother, whilst actually labouring under some syphilitic affection of the genitals; but those, perhaps, have carried credulity to the highest pitch, who hold that the virus may be transmitted to the infant through the medium of the nurse's milk.

M. Des Brus having examined each of these opinions, has furnished the following conclusions.

That, as in the case of other diseases, well characterized forms of syphilis may be transmitted to the fœtus in utero at the moment of conception. Such cases are, however, of extremely rare occurrence. Nor does he think such an admission favours the belief in the existence of a specific venereal poison, since phthisis, and many other diseases not suspected of depending upon a peculiar virus, are manifestly hereditary, and transmissive from parents to their offspring like the features of the countenance, habits, propensities, mal-conformations, etc. There is no doubt that various infantile affections have been regarded as of syphilitic origin, which depended upon very different causes, and that much mischief has thus been occasioned by improper and highly injurious treatment. Besides the cutaneous, scrofulous, erysipelatous, and other affections which have been classed among the ordinary appearances of infantile syphilis, the celebrated Levret has designated dropsy as one of its most constant attendants! The truth is, that great confusion and uncertainty exists among authors of eminence respecting the genuine characteristics of infantile syphilis, and nearly all of them have regarded as such, appearances which have exhibited themselves upon children totally exempt from infection, and born of parents wholly free from taint or the suspicion of a taint.

In support of the position, that what he calls veritable hereditary syphilis is of comparatively rare occurrence, M. Des Brus has appealed to the results of researches made among the foundlings of Paris, by M. Benoiston de Châteauneuf. All things considered, there does not exist a finer field than Paris for pursuing the inquiry. The observations are made upon no less than twenty-one thousand six hundred and twenty-six infants placed in the Foundling Hospital, from the year 1818 to 1821. The mortality among these was such, that the proportion living at the end of the year was only five hundred and forty out of every thousand. "It is thought," says M. Châteauneuf, "that the vices of many parents exert an influence upon this frightful mortality. Nevertheless, the proportion of these children treated for syphilis at the Venereal Hospital, and taken there at birth, was only *seventeen out of every thousand.*" Whether all the cases regarded as of syphilitic origin were so in fact, may, we think, admit of a doubt, such has been the prevailing disposition to attribute morbid appearances to this cause. In answer to the query, can a fœtus, healthy at first, receive from its mother the venereal disease, supposing her to become infected during pregnancy? M. Des Brus observes, that such a thing, though possible, rarely takes place. His attempts to illustrate this subject, are, we think, some of the most weak and speculative to be found in his work.

M. Des Brus holds the opinion that whatever local syphilitic affection a nurse may labour under, there is no danger of her communicating infection to the infant, provided her mouth and breast remain free from disease. This belief rests upon the ground that no infectious matter or virus is contained in either the blood or milk.

> "Without doubt," says he, "if the nurse labours under violent pain, and is enfeebled by a profuse suppuration or protracted suffering, her milk may perhaps become a source of disease to the infant. But in this case it would act as an ordinary irritant and the disease occasioned would not be specific. The reason why practitioners have been led into error upon the subject is, that they have attributed to the milk the aphthous ulcers of the mouth, spots upon the skin, and other phenomena which may manifest themselves upon the infant, *although the nurse be healthy.*"

Our author thinks that the same doctrine holds in regard to the saliva, which, provided there be no affection of the parts furnishing this secretion, remains perfectly innocent, and all the facts reported of contagions communicated by means of spoons, kisses, &c. are mere inventions, or arise from persons having some alteration of those parts. He applies the same observations to the cases in which it has been reported that children have communicated infection to the breast of the nurse in sucking, and thinks, that if these be accurately investigated they will be found to differ from what has been represented. An infant, he supposes, may have apthæ, so situated in the back part of the mouth as not to be perceptible, under which circumstances its saliva may be sufficiently acrimonious to produce irritation, or inflammation in the nipple with which it comes in contact. Most of the cases where it has been pretended that syphilis has been communicated from the infant in sucking, may, M. Des Brus thinks, be properly attributed to the inflammation excited by an irritating saliva or matter, arising from ulcers or apthæ in the mouth.

Adverting to the success attending the simple and rational practice recommended for the cure of syphilis, our author anticipates it may be objected to him, that the disease has probably become less serious than formerly. We have ourselves heard this objection maintained, but from actual observation of the effects resulting from different modes of treatment, we are induced to think, that by far the greatest proportion of the serious consequences which have from time to time been attributed to the venereal poison should have been charged upon the remedies applied.

Having in the first part of his work combated the prevailing opinions respecting the etiology and treatment of venereal affections, our author in his second division presents a multitude of facts in support of the positions he has undertaken to maintain. This plan of giving detailed cases, in addition to other advantages, is particularly useful in conveying to students valuable practical precepts, making them at the same time familiar with the obstacles which may arise during the treatment, and the best means of avoiding or contending against them. To have cited the particulars of each, of one thousand and four cases treated under the direction of our author without mercury, would have required several additional volumes to a work already very extensive. To avoid this inconvenience, M. Des Brus has presented a general statement of his patients, followed up with a sufficient number of detailed cases to illustrate the subjects under consideration. Thus, he has successively given examples of simple ulcers, of ulcers with buboes, phymosis, paraphymosis, etc. selected from among the most formidable cases.

Previously to exhibiting the summary estimates, which alone our limits admit of, we will give a general view of the treatment pursued by our author.

Regarding the ulcers, which manifest themselves upon various parts of the genitals, as products of a greater or less degree of inflammation, not specific in its character, the efforts of M. Des Brus are first directed towards the removal of the causes which might have a tendency to increase it. For this purpose he recommends his patients to maintain as strict repose as possible, places them upon a light regimen, and proscribes all applications of lint, ointments, etc. The last mentioned applications, he remarks, most frequently increase the irritation, and he is satisfied, from his own observation, of the dangerous tendency of the various topicals employed daily by most physicians for the purpose of promoting suppuration, or correcting its appearance—of cleansing ulcers, and destroying their sloughs—of removing the hardness of the base or borders, etc. When the ulcers are small, do not occasion much pain, or make rapid progress, he ordinarily prescribes repeated local bathing, with a decoction of linseed, or the leaves of mallows. If the pains be more severe, he recommends the occasional addition, to these decoctions, of the watery tincture of opium, poppy heads, or the leaves of henbane, advising that their effects be carefully observed, as he has sometimes known the opiate and narcotic applications aggravate the pains, when he had reason to believe they would have afforded relief. If the inflammation is very severe, if the ulcers make a rapid progress, if the pains are acute, or the neighbouring tissues become swelled or thickened, he recommends prompt recourse to leeches, the number to be regulated by the degree of inflammation. Far from thinking that they tend to increase the existing evil if placed too near the seat of disease, he says that he always endeavours to have them applied in the centre of the largest ulcers, or, at all events, as near to them as possible. By the aid of local bleedings, he states that he has commonly succeeded readily in dissipating phymosis, and preventing the consequences occasioned by the constriction produced by the prepuce in paraphymosis. During the inflammatory stage, he recommends refreshing drinks to his patients, which drinks, towards the close of the treatment, he renders diuretic or diaphoretic.

Under other circumstances, as for instance, where the irritation being slight, there exists a small, stationary, and indolent ulcer, he recommends recourse to moderately stimulating lotions, preferring, to all others, those of the sulphate of copper, or nitrate of silver. Among other preparations he occasionally employs lime water, and the concentrated liquor of Van Swieten. He likewise sometimes recommends them on the first appearance of the affection, when the ulcers may contain a caseous or tuberculous matter, as well as when the irritation appears to predominate in the lymphatic vessels.

At the close of phymosis or paraphymosis should induration or œdema remain, subsequently to the application of leeches, he advises recourse to bathing with a solution of the sub-acetate of lead, or decoctions of oak bark, nut-galls, etc.

In gonorrhœa, or, as he more significantly styles it, *urethretis*, he recommends leeching, if the pain is severe, and even when this is not the case, provided the discharge is abundant or has resisted other means. In cases where the irritation is less violent, emollient baths and drinks will suffice; revulsives, such as the tincture of iodine, balsam copaiva, extracts of juniper and turpentine, being administered towards the close, when it shall appear adviseable to put a stop to the running.

Considering buboes as the products of an irritative tumefaction in one or more glands, occasioned most frequently by sympathy, he regards such tumours as absolutely similar in their nature to those which ensue to the hæmorrhoids, to furuncles, and other affections regarded as *not specific.* When the irritation is considerable, absolute repose is to be enjoined, and leeching, poultices, and bathing employed. If, on the contrary, the tumours be hard, indolent, and stationary, efforts are to be made to excite the organic action of the part, by the application of blisters, ammoniacal liniments, and especially by frictions with the tincture of iodine. Should the effect of these stimulating measures prove too active, immediate recourse is again to be had to poultices, and should these not be sufficient, leeches must be applied. It is generally of advantage to alternate the use of cataplasms with frictions of iodine, that too great irritation may not be excited. M. Des Brus, further recommends, at the same time, the internal administration of the tincture of iodine, for the purpose of hastening resolution. If, however, in spite of all these measures, suppuration takes place, he does not, like many practitioners, wait for the entire maturity of the tumour. He thinks a speedy outlet should be given to the pus, by means of a lancet, whilst the collection is yet small. Should the wound enlarge, or its bottom assume a greyish hue, and the pus discharged appear of a bad quality, should the edges swell, ulcerate, become hard, or painful, these effects are to be viewed as altogether the products of ordinary inflammation, and speedy means are to be adopted for the removal of the cause, by the application of leeches, anodyne poultices, &c.

Observing that ulcerated buboes very often extend rapidly under the influence of gastric irritations, and that this is the most frequent cause of mortification and the hospital gangrene, M. Des Brus, pays strict attention to the first passages; promptly attacking irritations in them, not by the administration of purgatives, emetics, and bitters, in the way too often practised, but by means of diet, mild drinks, emollient fomentations, or leeches, according to its intensity.

If, during the treatment, or towards its close, new morbid phenomena manifest themselves either near or at a distance from the seat of the primitive affection, our author does not look upon them as the products of a general infection, and dissipates them easily without mercury. Considering vegetations as the effects of local excitement of the part on which they are situated, he treats them by means of emollient baths, or should they persist, by excision or cauterization. In a word, regarding all venereal symptoms as the products of irritation, he attacks them upon this principle.

Such is a general outline of our author's mode of treating syphilitic affections. The results of his practice come next to be considered. From the general table of the patients with various venereal affections treated by M. Des Brus, it appears that the whole number placed under his charge, from April, 1822, to January, 1824, was 2805.

From the 1st of April, 1822, to March, 1823, 1150 patients were admitted into the hospitals, of which 325 were affected with gonorrhœa; the remaining 825 were treated with mercury.

From the month of March, 1823, to the 16th of August, 1824, 1655 were received, of which 309 were cases of gonorrhœa. Amongst the 1346 remaining, 342 were treated with mercury: so that between the month of April, 1822, and the 16th of August, 1824, M. Des Brus treated 1167 patients with mercury, and 1004 without it, the number of gonorrhœal cases deducted. When he left the hospital, 82 patients remained under treatment, 57 of which did not use mercury.

Of the 947 soldiers cured without mercury, 325 were affected with primitive ulcers—273 with ulcers and buboes, or buboes alone—201 with ulcers attended with phymosis, paraphymosis, and tumours—148 with symptoms of confirmed syphilis, either primitive or ensuing upon treatments with or without mercury.

Of 317 patients treated by mercury since the month of March, 1823, 188 were affected with primitive ulcers—106 with ulcers with buboes, or buboes alone—23 with ulcers and phymosis, paraphymosis, or with symptoms of confirmed syphilis.

The results exhibited by the statements and comparative tables furnished by M. Des Brus, show that the non-mercurial treatment adopted for the cure of primitive ulcers effected radical cures in a very short time, and with little trouble or inconvenience to the physician or patient. It appears from a comparative table, showing the time consumed in the treatment of primitive ulcers by the two modes of practice, that out of 325 patients cured without mercury, only 42 were more than 30 days under treatment; whereas of 188 treated with it, 137 remained in the hospital over the time mentioned.

Similar comparative estimates applied to the cases of *ulcers and buboes*, show that the treatment without mercury produced resolution in a comparatively greater number of buboes than the mercurial treatment, and further, that this affection was much more common under the mercurial than the non-mercurial treatment. In point of time the advantage was altogether on the side of the non-mercurial practice.

The most conclusive evidences are furnished by M. Des Brus, of the prompt efficacy of leeches in obviating the serious consequences attendant upon various inflammatory affections to which the tissues of the penis are subject. Indeed, the proofs that ulcers and other concomitants of the venereal irritation can be readily cured by simple antiphlogistic means, and without the least assistance from mercury, are extended even to prolixity. The cases here furnished, added to those given by Rose, Guthrie, Thompson, Hennen, Carmichael, and others, present the most conclusive evidence in favour of the practice.

M. Des Brus states that by means of leeches he has often been able to afford prompt relief to the effects of the strangulation produced by the prepuce in paraphymosis, and thus obviate the necessity of a surgical operation, often called for in such cases. Were we to judge from our own practice and observation, which have furnished pretty ample opportunities, we should decide against the necessity of cutting in any instance, having seen many of the worst cases speedily relieved by general antiphlogistics, together with the warm bath, frequent warm fomentations, and poultices. As there is perhaps no part where inflammation occasionally developes itself more suddenly, or progresses more rapidly than on the penis, so there appears to subsist a corresponding susceptibility to return speedily to a healthy condition under favourable circumstances. Hence the proper measures for reducing inflammation, are seldom unsuccessful, and this point once effected, the prepuce resuming its natural dilatability, an easy reduction is effected.

The fourteenth chapter of our author's treatise, relates to matters of extreme importance in a practical view, namely, whether the phenomena called consecutive, more frequently succeed the non-mercurial or the mercurial treatment. A question of this kind, some few years since, would have been regarded as idle, and unworthy of serious consideration; and even now there are many who would hardly condescend to discuss the point. But it affords us pleasure to believe that the number is not small, who have acquired better information, or who possess sufficient candour to admit, that something more may yet be learned upon the subject of venereal complaints. These will read with interest our quotations from M. Des Brus.

It is a common belief among physicians, and one most firmly rooted in the minds of the common people, that, unless the venereal disease has been treated by mercury, the patient, together with his wife and children, will be subject to a long train of affections, occasioned by the presence of the virus, left in undisturbed possession of the system. What direful consequences has this belief occasioned? To what repeated salivations and dreadful mercurial courses has it led? What destruction and mischief have thus been entailed upon individuals and families? The practice furnishes a happy illustration of the bear in the fable, which by his friendly officiousness, broke the head of the man in attempting to kill the fly.

As the best means of dissipating the doubts of those who believe that there is no security but what is to be obtained through mercury, we present the comparative table drawn up by M. Des Brus, showing the proportion of cases wherein secondary symptoms manifested themselves after the mercurial and non-mercurial modes of practice.

Of 1142 cases treated with mercury,* by M. Des Brus, 62 were affected with secondary symptoms. Of these, 6 had return of ulcers —1 return of ulcers, with ulcers of the throat—1 urethritis ensuing to ulcers, and followed by ulcers and warts—1 return of ulcers and warts—7 warts following ulcers—12 return of buboes—5 buboes following ulcers—9 consecutive affections of the anus—3 affections of the anus with ulcers of the throat—1 consecutive ulcer of the conjunctiva—11 ulcers of the bucco-pharyngeal mucous membrane—1 spots on the skin—1 pains of the bones and spots on the skin—1 pustules, ulcers of the throat—1 extensive squamous eruption—1 inflammation of the bladder, prostate, &c.

Of 947 patients treated without mercury, 24 only had secondary affections—of whom, 2 had a return of ulcers—4 secondary warts—6 return of buboes—4 secondary buboes—5 affections of the anus—2 affections of the mouth—1 pustules, callossities, excrescence of the anus.

Thus the proportion attacked with secondary symptoms, after a cure without mercury, was *one-half less* than among those treated by mercury.

Did these results of our author stand alone, or were they at variance with those of many others who have pursued similar investigations, there might be some reason for caution in admitting them. But the testimony furnished by others, and the evidence of our own private practice, correspond so nearly with those of M. Des Brus, that we are ready to admit his statements without hesitation.

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* We are disposed to believe that his mode of employing this active agent must have been more judicious than usual, to account for the comparatively small proportion affected with secondary symptoms.

The origin of the secondary affections, such as those of the throat, skin, etc. M. Des Brus accounts for by referring to a sympathetic influence exerted by the genital organs over those parts, and not upon the commonly received principle of a virus. That his views upon this subject may be well understood, we shall examine some of his positions and arguments.

The extension of inflammation from one tissue to another, he thus exemplifies. It often happens that during the existence of a blenorrhagia, one or more small ulcers make their appearance upon the glans or prepuce. These are to be attributed to the strict connection subsisting between the affected tissues; to the same principle which operates in exciting morbid action in the testicle, groin, or bladder, when the extremity of the urethra has been the seat of disease. Should the irritation in the new locality, exceed that in the primary situation, this last affection, a gonorrhœa for instance, would most probably subside. Thus it is, that the appearance of ulcers on the prepuce or glans, after a gonorrhœa has existed some time, and has become slight, gerally puts a stop to the discharge. With respect to those engorgements of the testicle, so often observed on the termination of discharges from the urethra, our author has adopted the explanation of their origin furnished by M. Lagneau, which is as follows:—

> "The appearance of these swellings towards the close of discharges, and when the patient imagines himself well, has nothing in it which ought to be thought surprising: for in the vigour of the inflammation, the local excitement of the urethra is much too violent to be turned out of its course by a light irritation directed upon the testicles. It is only when the pain and other symptoms of inflammation diminish in the canal, that the excitement of the testicles could mount above the remains of the urethral inflammation, and overcome it entirely, together with the discharge which it produced."

By the assistance of this well known principle, aided by a knowledge of the different excitability of individuals and the various structures, all the morbid symptoms which develope themselves as a consequence of venereal irritation may be readily and most satisfactorily explained.

The return of ulcers and other affections after they may have disappeared, though supposed by some to prove the continued presence of a poisonous matter or virus in the part, may be much better explained by reference to other causes. It is a law of animal life, which must be familiar to every one of the least observation, that when a part or tissue has been irritated or inflamed during a certain time, it acquiries a susceptibility of becoming so again. It is this tendency to relapse that makes it so difficult to prevent the return of gonorrhœal discharges, ulcers, eruptions, and other affections having a venereal origin, the parts disordered remaining more excitable, and disposed to invite and take on morbid action. Under such circumstances, causes so slight as to be overlooked in attempts to ascertain them, as for example, a little excess at table, some visceral irritation or disturbance, may induce a return of the affection, which may be charged upon the residence of a foreign poison in the part. But some may urge against this explanation, that we sometimes observe the affection on its return choose a different situation from that which it first occupied. But do we not observe the same thing take place in erysipelatous and other affections, which leave one situation, and appear sooner or later in another and perhaps very distant part? And yet this disease is not believed to depend upon the presence of a specific poison either existing in a particular part, or generally diffused. The distinction so long established between the laws or principles regulating these affections are obviously chimerical, and when the subject is investigated with proper candour, they will be discerned to be founded in prejudice.

The succession of symptoms occurring in what is generally recognised as secondary syphilis, may all be explained as before observed, upon the principle of sympathy. M. Des Brus ascribes the credit of having been the first to advance this explanation to BARTHEZ, whose words are to this effect.

> "The *sympathy* which the organs of generation have with those of the throat, may partly be owing to the circumstance that the secretions of both are of a mucous nature. This agency of sympathy appears to determine above all others the successions which we often observe in venereal complaints among the lesions of different organs."

Hunter professed a similar belief, and traced the chain of connection from the throat to the skin, from the skin to the bones. This course, although frequent, M. Des Brus does not regard as regular, since it often happens that the genital organs exert a primary influence upon the skin or the fibrous system, and the development of ulcers in the throat is consecutive to the cutaneous affection.

M. Des Brus has treated the subject of the sympathetic connection subsisting between the various parts of the body, at much length, and we think, illustrated it very happily. Before closing his observations, he thus anticipates an objection which may be advanced by some.

> "By the aid of that sympathy which I invoke, it is doubtless difficult to account for the appearance of exostosis, caries, deep-seated pains, and other morbid phenomena, attributed to the virus, four, five, ten, or twenty years after the first infection. But these pretended venereal complaints have no other connexion with the cause of the primitive symptoms, than that which the preju-

diced imagination of authors has created: they are no more venereal than the gastro-enteritis, pleurisies, anginas, rheumatisms, and other phlegmasia, which we observe consecutive to chancres; and it is as impossible to prove the syphilitic origin of the first affections, as it would be to prove that these last are venereal, if the notion should arise to enroll them under the syphilitic banner. In all times there have been observed ulcers in the throat, excrescences, exostosis, caries, pustular eruptions on the skin, etc. and the same causes which produced them formerly, can doubtless as well occasion them at present."

In concluding our analysis of M. Des Brus's treatise, we should deem some apology for its length necessary, did we not suppose our course sustained by weighty considerations. The treatise, it must be recollected, is extensive, remains in a foreign language, and copies of it in this country are scarce. The subject it relates to is one of high interest, and the principles discussed, if successfully maintained, utterly subversive of those which have generally regulated the treatment of venereal affections. The doctrines of the physiological school are attracting much attention in this country. As yet, however, they are little understood, and often grossly misrepresented. M. Des Brus being a disciple of this school, has of course regulated his practice in conformity to its principles. With the views of physiological medicine which we entertain, we conceive that we have done a service to the profession, if we have succeeded in exhibiting a clear view of the doctrines of our author—doctrines which we believe will ultimately promote the cause of humanity, by lessening abuses, and leading to more lenient as well as more efficient modes of practice. In pursuing our task, we have been less anxious to expose the errors which we might meet with, than to bring forward those views which may lead to useful practical results.

E.

BIBLIOGRAPHICAL NOTICES.

1. *Handbuch zur Erkenntniss und Heilung der Hinderkrankheiten.* Von Adolph Henke. 2 vols. 8vo. third edition, revised and improved. Frankfort on the Mayn, 1821, pp. 771.

We have never seen any work on the diseases of children with which we have been more pleased or instructed, than the one which it is our intention to introduce to the notice of the reader. It is evidently the production of one who has been practically conversant with his subject, and who possesses a mind capable of properly improving his opportunities of observation. The first volume commences with an introduction, in which, among other topics, the author treats of the causes of the great mortality among children. We are scarcely prepared for the following statement of the deaths in the city of Berlin, where of 76,331, born in a period of fifteen years, 40,008 died in childhood. From the statements of Dr. John Clarke, it appears that in London, in thirty-nine years, there died 836,285, of these there were under two years of age 281,408, or nearly one-third. This extraordinary mortality among children is attributed to their peculiar susceptibility, to febrile eruptive diseases, to hooping cough, croup, diseases of teething, hereditary diseases, scrofula, rachitis, defective organization, faulty physical education, and particularly to the difficulty in the diagnosis and treatment of their diseases. The peculiarities of organization of childhood are considered as characterised, 1st, by a greater weakness of the solids, and a disproportionate quantity of fluids; 2d, by a powerful exercise of the process of assimilation, 3d, by the process of evolution. A list of the best works on diseases of children concludes the introduction.

The first section contains directions for the treatment of newly-born children,—the causes of respiration and the circulation of the blood At the first washing the child, to remove the unctuous matter, (vernix caseosa,) which adheres to the surface, he directs warm water with soap; all stimulating lotions are injurious: a little wine may be added if the child is very weak.

The second section relates to bringing up children without the mother. The circumstances which forbid a mother to nurse her child are, 1st, where she labours under any contagious disease, as the venereal, contagious chronic eruptions; &c. 2d, where the mother has a prodisposition to consumption, particularly if inherited from her parents; 3d, where there is hereditary tendency to gout, scrofula, rickets, epilepsy, &c. 4th, where there is general weakness of the body or nervous system; 5th, old age of the mother; 6th, high grades of fever or local disease of the breast. Under these circumstances, where a wet nurse must be employed, the directions given, are that she should not be above thirty years of age, have had not more than two children, and have been confined, as nearly as possible, at the same time as the mother, and free from all hereditary, contagious, or acquired diseases. Examination of the milk, to determine the suitableness of a nurse, our author objects to; he says the best recommendation of a nurse is to produce a healthy child which she has brought up; her moral character should be inquired into. Particular directions are given for artificial bringing up of children: this mode he considers less injurious than is generally supposed; the great mortality among children artificially reared, is ascribed to neglect of other circumstances.

The third section treats of the dietetic and physical education of children; by this is meant the circumstances necessary for the free development of the mental and bodily powers. 1st, of cleanliness; this is to be preserved by washing the child, daily, with warm water. Our author very properly objects to the habit, which is too prevalent, of emersing the child in cold water, without regard to the state of its constitution: in feeble children, particularly, it is productive of great mischief, and by carrying off the heat, increases the evil it is intended to remedy. 2d. Fresh air.—Under this head, the advantage of daily exercise in the open air is urged with the importance to which it is justly entitled, as contributing in a great degree to invigorate the constitution and stimulate the mind. 3d. Dress.—The quantity and manner of clothing children are minutely given, and particular directions to avoid interfering with the growth of parts by tight bandaging. The remaining subjects of this section are sleep, motion, rest, and covering of the head.

Fourth section treats of the diseases, faulty organizations, and defects of children immediately after birth. 1st. Asphyxia.—An important practical distinction is here made by our author in the treatment of this disease, whether it arises from plethora and over-loaded vessels, or from debility; the first being an apoplectic state, is to be remedied by an immediate division of the cord, and allowing about ℥j. of blood to escape, the second by placing the placenta in warm water, and stimulating the child. Hare-lip, spina bifida, hydrocephalus, hernias, club-foot, &c. are described in this section.

The fifth section treats of the general and local diseases peculiar to the earliest periods of childhood. Erysipelas is properly attributed to faulty condition of the liver and gall-bladder, and must be treated by attention to the stomach and bowels. Jaundice, induration of the cellular membrane, convulsive diseases, diseases of the digestive organs, flatulency, diarrhœa, vomiting, cholera, &c. The communication of the venereal disease to the fœtus in utero, is maintained by reference to numerous undoubted cases.

The chapter on vaccinia is highly interesting. The appearance of the pock from day to day, are given, and compared with the false pock. The lymph should be used as soon as possible after it is taken and inserted in two or three places and in both arms. The controversy among European writers as to the possibility of small-pox being taken after true vaccination, is stated. The author is inclined to think it cannot. After stating the argument, he concludes by saying, that "whatever opinion one may have of the foregoing controversy, the protecting power of vaccination against small-pox remains unshaken. Measles and scarlatina are treated of, and a particular account of Dr. Cuone's method of cure by cold affusion, is given.

The first volume closes with an allusion to some of the preservative means against scarlatina which have been proposed. Hahnemann's famous drop, which contains the thirty-fourth millionth part of a grain of extract of belladonna, and which he asserts is an antidote to scarlatina, our author thinks requires further proof.

The second volume treats of inflammatory diseases of the breast, abdomen, liver, neck, ears, &c. A very interesting chapter is given on croup—to American physicians is attributed the credit of giving advantageously large doses of calomel in this and other affections of the throat—particular mention is made of Rush, Kuhn, and Bard. The eighth section treats of asthma and other convulsive diseases. The ninth and last section treats of hereditary diseases—scrofula, consumption, rickets, scurvy, cancer, &c. The work concludes with a valuable set of formulæ for extemporaneous prescription. J. M. P.

2. *Médecine Légale relative aux alienes et aux Sourds-muets, ou les lois appliquées aux disordres de l'intelligence.* Par J. C. Hoffbauer, Professeur à l'Université de Halle, traduit de l'Allemand, par A. M. Chambeyron, avec des notes par MM. Esquirol et Itard. Paris, 1827, pp. 388, 8vo.

Much as has been written on the mental affections, as connected with the administration of justice, the subject still remains in an unsatisfactory state, and this part of medical jurisprudence appears to have advanced but slowly since the time of Zacchias, many of whose opinions, in cases of real or imputed insanity, evince as well-grounded a knowledge of the morbid alterations of the intellect and hallucinations of mind, as those of any modern writer. There are no points of legal medicine that more absolutely require the assistance and decision of physicians, than those connected with mental diseases. The ideas and opinions of the world, as regard insanity, are extremely vague and erroneous; added to which there is so strong a taste for the wonderful and unnatural implanted in the minds of the multitude, thus exciting their imagination, and leading them to believe that events in themselves perfectly natural, and circumstances easily explainable, are of an extraordinary character, that if suspicion is once generated that insanity may exist in an individual, his most trivial actions are construed into acts of madness, and the slightest excitement of mind, into ravings.

As is observed by Harlam, "patient inquiry and daily communication with deranged persons, and an attentive observation of their habits, confer the means of judging on medical men, and particularly on those who have, for a series of years, solely confined their practice to this department of the profession."

The work under consideration is a valuable addition to the library of the medical jurist, from the immense number of interesting facts it presents, and is rendered of greater utility from the practical notes and cases added by the French editors, particularly those of Esquirol, whose opportunities of observing the insane, have been equal, if not superior to those of any other writer.

This treatise has obtained great reputation in Germany, and although by no means perfect, it presents a greater assemblage of facts and of clear reasoning, than are given in any work in our language; the arrangement, however, of the mental diseases, is too much tinctured with those metaphysical and abstract subtleties so prevalent among the writers of that country. Insanity has been divided by most writers into three great classes; that of idiocy or amentia, where there exists a greater or less deficiency of all the faculties of mind;

mania, or an exaltation of these faculties, characterized by acts of violence; and finally melancholy, or a constant and uninterrupted bias of the mind to some one point or idea, whether false or true.

For the purposes of law, that wide-sweeping and indefinite clause, "non compos mentis," may be sufficient; as all the law requires to ascertain is, whether such a state of mind exists, as actually to disqualify the person in question from conducting himself with safety to others, or of managing his own affairs, or in fact if he has sufficient understanding to discriminate between good and evil, right and wrong.

The different codes of jurisprudence differ somewhat in their definitions and divisions of insanity.

As regards commissions of lunacy, or where insane persons require to be committed to the care of their friends for the security of their persons and properties, the question in both England and the United States, is compos mentis or non compos mentis; and in criminal offences, it must be proved that insanity actually existed at the time the act was committed, in order that the alleged criminal should be exonerated from the penalties of the law. M. Chambeyron makes some very pertinent observations on this subject, which should be borne in mind in cases where a plea of insanity is set up.

"This incontestible principle, (that of the state of the intellect at the moment the crime was committed,) has been either overlooked or misunderstood in many tribunals, they having confined themselves entirely as to the state of the accused at the time of trial; this is wholly erroneous, as the state of intellect, at the time of trial, may differ widely from what it was at the time the crime was committed, even if there has been a lapse of only a few hours."

The Roman law only recognises two species of insanity, menti capti et furiori. The Prussian makes the distinction of maniacs and idiots. The French code speaks in various parts of mania, insanity, and idiocy, without, however, determining these divisions.

Mr. Hoffbauer, after speaking of mental diseases in general, enters on the consideration of imbecility; this he thinks differs in many respects from stupidity; but though his arguments and reasoning are extremely ingenious, this division is scarcely susceptible of rigorous examination; he thinks there are five well marked degrees of imbecility, of which he details the symptoms; when it has reached the third there is an almost complete destitution of intelligence, and of course a person thus afflicted would not be accountable for his actions.

The next chapters treat on the different grades of insanity and mania, and although interesting, we are obliged from want of space to pass them over in order to arrive at what we consider as the most important part of the work, namely, on somnambulism, and the deaf and dumb.

The first of these states is of considerable interest in a legal point of view; for although there can be no doubt but that it is a disease of the mind, yet the questions which may arise from actions committed under its influence, have been enveloped in much obscurity. The great points to be established are, whether the somnambulist possesses consciousness of, or is master of his actions, and whether he is responsible for any crime he may commit in such a state. Mr. Hoffbauer is of opinion, that although the somnambulist should be considered as suffering under an aberration of intellect, during an access of his discase, yet as his malady must be known to him, he certainly is culpable if he does not previously take such precautions as would prevent him from injuring others, and that he is liable for any faults or crimes that he may commit.

The chapter on the legal responsibilities of deaf and dumb is of great value, and is rendered still more so, by the copious and erudite notes of M. Itard; we are, however, unable to present an analysis of it without extending this notice further than our limits will allow. It deserves an attentive and close perusal, and is of especial value, as it draws with precision and clearness the various distinctions to be made between the deaf and dumb in an educated or neglected state.

The remainder of the work is devoted to the consideration of those temporary states of the intellect which may become objects of legal inquiry, such as drunkenness, monomania, &c. M. Esquirol, who has paid much attention to this subject, has subjoined a long and interesting note on monomania homicide, drawn from cases which have fallen under his notice.

The whole work will amply repay a study of its contents, and we should be glad to see a translation of it, that its benefits might be more widely extended.

R. E. G.

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3. *A Manual of Surgical Anatomy, containing a minute description of the parts concerned in Operative Surgery, with the Anatomical Effects of Accidents and Instructions for the Performance of Operations.* By H. M. Edwards, D. M. P. Translated with notes, by William Coulson, Demonstrator of Anatomy, &c. London, duodecimo, pp. 427.

The author of this compendium, a physician of Paris, has been very favourably known for some years to medical and scientific men by his microscopical researches on the blood and other constituents of animals, as well as by contributions on various subjects. The work under consideration is one of the numerous manuals which have lately sprung from the French school of Medicine, and bears strongly that impress of science and sound medical knowledge which distinguish such as have come under our perusal.

In this compend the whole body is mapped, and of course artificially, into seventeen regions, each of which is treated of under a chapter. These regions are the superior region of the head—the naso-orbitar region—the maxillary—the auricular—the anterior cervical—the posterior cervical—the anterior thoracic—the posterior thoracic—the shoulder—the arm—the hand—the anterior region of the abdomen—the lumbar region—the pelvic—the coxo-femoral—the knee and leg—the foot.

In each chapter the boundaries of a region are first of all laid down according to the idea of the anatomist himself. This is followed by a description of the superfices, its elevations, its depressions, its shape, the bony prominences concerned in it, in short, all those points of observation which constitute picturesque anatomy, the study of which is so much neglected, notwithstanding the great facility with which it may be followed, and its immense importance to the every day business of the physician. The proper anatomy itself is then entered upon by an account of the thickness and texture of the integuments, afterwards the superficial blood-vessels and nerves, the state of the cellular substance, whether it be loose or close, abundant or scarce: the fascia, if there be one, comes next, then the shape, origin, and insertion of the muscles, and the direction of their fibres, then the deep-seated blood-vessels and nerves, their course, relative situation to one another, and to the muscles. Without going further into details on this point, it may be stated, that the general rule of description, like that of the great work of Mascagni, the Anatomia Magna, is from the circumference to the centre, very much after the order in which the parts would present themselves when exposed by a simple incision. The articulations and bones conclude the anatomical descriptions.

The latter are interspersed with general allusions to the accidents to which the regions respectively are exposed, the pathological changes to which their constituents are subject—and the rules adopted by men of eminence for performing certain operations. We have here and there short historical sketches of operations executed, as for example those on the vertebræ, for relieving the medulla spinalis from compression, beginning with that of the late Mr. Henry Cline—the removal of considerable portions of the lower jaw—the extirpation of the parotid gland—the taking up of the arteria innominata, &c. &c. In regard to the extirpation of the parotid gland, Mr. Edwards speaks like a practised and expert anatomist, who knows what is probable or improbable from the intrinsic evidence of the case. "It is evident that the extirpation of the parotid gland, when this organ has become schirrous, must be an operation extremely difficult of execution. Indeed, it is impossible to do it without opening the external carotid artery, and dividing the trunk of the fascial nerve, which necessarily produces paralysis of the muscles of the corresponding side of the face."

Out of the number of published cases, where this extirpation is said to have been accomplished thoroughly, there are very few of a character rendered unquestionable by the precision of their anatomical details, and the general credit of the narrators. Such as we are most disposed to put confidence in, have been reported by the late Mr. Béclard, Professor of Anatomy in the Paris school of Medicine—by Mr. Lisfranc, very advantageously known for his consummate skill as an operator—and by Mr. Kirby, an eminent surgeon of Dublin. It is stated that another, also pretty well authenticated, has occurred in Germany, but we have not seen the report of it.

We concur with Mr. Edwards when he asserts, "that in the greater number of cases the parotid has been supposed to be extirpated when merely a superficial tumour has been removed. In fact, there is generally a lymphatic ganglion situated beneath the portion of the parotid, which extends below the angle of the jaw, and another lodged in the centre of this gland, opposite the spot where the external carotid bifurcates. It frequently happens that these are enlarged, which gives rise to the mistake to which we have alluded." Moreover, judging from personal observation, the salivary glands are less liable to disease than any other part of the human system: the instances are exceedingly uncommon, excepting the pancreas, where they undergo any pathological change appreciable to the eye; on the contrary, cysts and tumours from the cellular substance connecting their lobules, are by no means so rare, their development pushes aside, compresses, and even causes the partial obliteration of the contiguous gland. These facts were very well known to the late Allan Burns, and were insisted on by him in opposition to the pretensions of surgeons who were not practical anatomists, who consequently could scarcely appreciate the extent to which their assertions went, and who, on that account, might be excused from the charge of a voluntary departure from veracity. It is every day more and more apparent, that the great avenues to human error, are false observations made under a full assurance of their fidelity, and that the only way to detect them is an acute inquiry into the intrinsic testimony of the facts narrated. The individual whose productions bear this test, must either have told the truth as it is in nature, or else be most profoundly acquainted with his subject, in order to contrive so ingenious a fabrication. We know no class of people who stand more in need of the motto, "fidem non derogat error," used by the celebrated Cullen on his tickets, than the class of wonderful operators, and we are disposed on most occasions to extend its charitable provision to them.

As the design of Mr. Edwards' work seems to have been purely to assist the operator on parts of the body within reach of his knife, so very little, indeed almost next to nothing, has been said of the contents of the cranium, of the thorax, and of the abdomen; though their parietes are described with considerable precision. From the unpretending nature of this volume, we can find no objection to its brevity, to the very numerous omissions of important parts in it, and to the want of novelty in its details. We have, however, to comment on one or two points of error: at page 257, it is stated, in the text, that the subcutaneous fat of the mons veneris, accumulates in such quantities "as to form a transverse fold of the skin which covers the groin and external parts of generation, and which, when greatly developed, forms the *tablier* of the Hottentot women." In the Voyage des Decouvertes aux Terres Australes, by M. Peron, in which is presented decidedly the best account of this peculiarity; it is evident from the drawings, that the conformation is nothing more or less than the nymphæ in a state of considerable elongation with tumefaction; a condition, specimens of which are constantly met with in the practice of medicine, especially in public women. There is indeed in our possession a copy of the parts executed under the eye of M. Lesueur, the artist, who, in company with Peron, took the original drafts of the far-famed *tabliers* of the Boschismans; and in this copy it is evident that the tablier is merely an unusual development of the nymphæ. Again, Mr. Edwards states that the sebaceous follicles constituting the caruncula lachrymalis are united together by a small cartilage. Mr. Edwards' experience here is certainly anomalous; or if by the cartilage he means the membrana nictitans placed along side of the caruncula, he has attributed to it a structure not common, and which, in this country at least, only rarely occurs.

Like all other treatises on surgical anatomy, this one is far from being elementary and suited to the comprehension of the young student. Each picture or region, though its traits are coarse, abounds in a multitude of objects which should be first studied separately and analytically: as it is, descriptive anatomy, views of portions of nerves, of arteries, surgical practice and surgical opinions are exhibited in one and the same panorama. From which it is evident that this useful little volume, though well adapted to the advanced student or to the practitioner, as presenting an outline of anatomy and operative surgery, will rather embarrass the tyro by presenting to him a very complex picture. The notes of the translator are not very numerous, but, so far as they go, are apposite and good. We find him, however, disposed to perpetuate an error, p. 67, which has crept into the anatomical writings of his countrymen,* on the authority of Petit, we believe. To wit, that the frænum of the tongue might be divided to so great an extent as to cause the point of the tongue to be carried very far back into the mouth, so far indeed as the top of the larynx, and thereby to produce suffocation. He says it is reported of the negroes that they possess very great mobility of the tongue, and when tired of their lives frequently kill themselves by throwing the tongue back into the larynx. To this we may reply that our life has been spent in the midst of a negro population, that we have frequently attended to their habits and diseases, and over and over again dissected them from head to foot, and that their tongues as well as all other parts of their organisation, come precisely within the normal arrangement of the most approved Caucasian model. It is therefore impossible for them, spontaneously, to swallow their own tongues, under any circumstances of grief or dejection of mind, and the clipping of the frænum linguæ with them as with others, must be an insignificant operation so long as the genio-hyo-glossi muscles are left untouched. W. E. H.

4. *Traité Théorique et Pratique des Maladies de la Peau, fondé sur de Nouvelles recherches d'Anatomie et de Physiologie Pathologiques.* Par P. Rayer, Médecin titulaire des Dispensaires de la Société Philanthropique, Médecin du Bureau Central des Hôpitaux, Membre-Adjoint de l'Académie Royale de Médecine, Membre de la Société Médicale d'émulation de Paris, de la Société Médicale de Londres, des Sociétés de Médecine de Caen, de Lyon, etc. Paris, 2 vols. oct. pp. 1401, with an Atlas of coloured plates.

This ample treatise shows that the attention which has of late years been directed to the investigation of diseases of the skin, remains undiminished. The opportunities afforded in the Paris hospitals for the study of this department of pathology, are very great. The amount of experience furnished in a single year by the St. Louis Hospital, entirely appropriated to the reception and treatment of patients with cutaneous diseases, is perhaps equal on an average to that afforded by a whole life of private practice. Such vast opportunities for observation, aided by more correct principles of pathology, must necessarily tend to lessen the difficulties which have hitherto involved this branch of medicine.

M. Rayer has adopted the classification of Willan, regarding it as the most exact and methodical hitherto proposed. The chief changes he has made, are the addition to the exterior evidences, which alone served as the ground work of the English writer, of the consideration of conformation, structure, and morbid alterations as diagnostics. By investigating cutaneous diseases, with reference to their anatomical and physiological relations, he thinks it becomes more easy to ascertain their precise nature, so often left undetermined by Willan and others.

The description of the affection styled *dartre squameuse*, has, he says, been composed of an assemblage of some of the symptoms of lepra, psoriasis, lichen agrius, and chronic eczema; that denominated *dartre crustacée*, of the symptoms of ecthyma, rupia, and impetigo. Other discrepancies are mentioned.

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* See Anatomy of the Human Body, by John and Charles Bell.

Bateman has represented an eczema of the ear under the name of *porrigo*. He has likewise admitted a porrigo *furfurans*, which M. Rayer observes he would not have done, if he had sought out the characteristics which distinguish this pretended affection from psoriasis or from the lichen *agrius* of the scalp. The employment of terms having an indefinite sense, has doubtless occasioned some obscurity. One writer, says M. Rayer, will speak of a tubercle, when he only means an incrustation, whilst another will treat of a squamous plate under the name of pustule.

Of all authors who have hitherto written upon diseases of the skin, M. Rayer unhesitatingly concedes to Willan the credit of having given the most accurate descriptions. In acknowledging the great difficulty he has met with in making an accurate arrangement of the phlegmasiæ, some of his views relative to this class are thus set forth.

"I have designated the most frequent complications of cutaneous diseases. In treating of each one, I have set forth the accidental phlegmasiæ which most frequently occur during their course. I have not spoken of the complications of acute diseases of the skin with continued fevers, the existence of which, as morbid individualities, I do not admit. But, I have reported some observations upon cutaneous phlegmasiæ complicated with intermittent fever, with respect to the seat and nature of which I have, in conjunction with several distinguished physicians, set forth a different opinion. I have shown by examples, how certain diseases of the skin appear to alternate with inflammation of the viscera or their membranes, and how one may be led to suppose that the first are converted into obstructions or internal engorgements, whilst these last becoming more intense, lead to the disappearance of the affection of the skin."

M. Rayer speaks slightingly of the anatomical researches hitherto made, for the purpose of acquiring a better knowledge of the structure of the altered integuments. But more recent ones have, he says, furnished him with valuable characters for the definitions of the forms of phlegmasiæ. In the history of measles, erysipelas, variola, scald head, purpura hæmorrhagica, icthyosis, and some others; he states that he has furnished anatomical details, which perhaps have never before been presented with as much accuracy.

M. Rayer alleges against the splendid coloured engravings with which Willan and Bateman, and Alibert, have illustrated cutaneous diseases, that many of them offer the characteristics of only one of the periods of the inflammations they were destined to represent. Thus, he says, it has happened that a disease described as *pustular*, has been drawn in the *squamous* stage, whilst another of the same class has been represented as tuberculous. To remedy such defects in his own plates he has carefully depicted the primitive forms of the inflammations, together with the successive alterations, taking his originals either from nature or the best engravings that have been published. His figures are not given of the natural size, but their number in a great degree compensates for this. There is besides, this important advantage attending his plan, that the book is far less costly, and therefore more accessible to the profession at large, than the highly embellished and very expensive works which have of late years been published.

M. Rayer attributes a large proportion of the chronic affections of the skin, to want of cleanliness, or other agents having a direct tendency to irritate the skin. Willan thought the former the most frequent source of cutaneous diseases among the lower classes of the inhabitants of London. Large cities having dense populations associated with great poverty, doubtless afford the greatest encouragement to the production and propagation of cutaneous diseases; and hence we believe we are either partially or altogether exempt, on this side of the Atlantic, from many of those disorders which appear to be frequent in older countries. A general and easy access to baths should be encouraged by the municipal authorities of every city. In France this important object has received great attention, insomuch that the poor possess the same advantages from the public institutions for the administration of baths, which the rich can only aspire to in other places. The number of gratuitous baths exhibited at the hospitals St. Louis and La Charité, is prodigious. In 1822, there were 127,752 employed in the external treatment at the St. Louis alone.

In relation to the general treatment of cutaneous diseases, M. Rayer thus expresses himself: "The regimen adapted to acute diseases is likewise applicable to a variety of inflammatory affections of the skin. A habitual and very great attention to cleanliness in dress; a diet consisting of white meats, fresh vegetables, mellow and watery fruits, contribute powerfully to confirm the effects of the medicinal treatment. A milk diet persevered in for a long time by persons affected with chronic and severe inflammation of the integuments, has sometimes effected a cure, sought in vain from pharmaceutical preparations apparently the best adapted to the case. Broths, made of veal, chicken or frogs, are suitable under the same circumstances, and may be well substituted for those of the tortoise and viper, now well understood to possess no other special advantage than those with which they have been invested by the credulous and superstitious." But although the antiphlogistic regimen is most frequently called for in the treatment of cutaneous affections, still the tonic and invigorating measures are often demanded.

M. Rayer, places great reliance upon the remedial agents applied externally, as acting directly upon the organ affected. *Local bleedings* now so much in vogue, he says are generally found most useful in the treatment of acute diseases of the skin, such as erysipelas, scarlatina, variola, rubeola, etc. The chronic disorders in which he has occasionally found them serviceable, are eczema, impetigo, psoriasis *guttata*, etc. In both acute and chronic inflammations of the skin, it is useful to employ bleeding with young persons of vigorous constitutions, and as often as the inflammation is general or accompanied with much pain.

Next to these means, he speaks of the advantages to be derived from the use of baths, either simple, or consisting of a decoction of bran, or other substances of a gelatinous, oily, or mucilaginous nature. To be most serviceable these baths should be temperate; for if taken too warm and continued too long, they rarely prove serviceable when the skin is inflamed. Cool bathing is useful in a great variety of chronic and obstinate affections. He speaks favourably of the effects derived from the cool baths embued with narcotics employed in chronic and painful cutaneous inflammations. Of sea-bathing he speaks more from the experience of others than from his own. Baths made in imitation of sea water, are in repute at Paris.

Vapour baths are found extremely useful in a multitude of disorders. They are more especially so in recalling certain inflammations to the skin, in removing scales and incrustations, and exciting the circulation in those parts of the integuments upon which they may be directed.

M. Rayer, does not place that reliance upon sulphur as a remedy for diseases of the skin, which has been so generally bestowed upon it by others. In fact, it has been so much regarded in the light of a specific for this class of ailments, that its use has been regulated almost entirely by empirical notions. An active remedial agent placed under these disadvantageous circumstances, must necessarily, sooner or later, come into discredit. M. Rayer speaks of the various natural and artificial sulphurous water baths, particularly adapted to certain affections. He thinks that the advantages of the sulphurous fumigations have been overrated, as they "not only," he says, "irritate the skin, like all other sulphurous preparations, but produce syncope, suffocation, &c." effects which we think should never occur under a judicious administration of them. "Sulphurous lotions and ointments have," he says, "analogous properties." This article has, most unquestionably, been employed, both externally and internally, with too little regard to general principles, which is sufficient to account for its often having proved mischievous. When, however, it shall assume the place assigned by a rational doctrine, it will doubtless occupy a high station among the remedies for cutaneous affections.

M. Rayer states that the inconveniences occasioned by the salts and oxides of lead, have been greatly exaggerated, and recommends them as often useful in moderating certain inflammations of the skin, attended with morbid secretions. The preparations of zinc are recommended under similar circumstances.

Mercurial lotions, baths, and fumigations, have, he says, not only been employed with success against the syphilitic, but likewise in some other chronic affections of the skin. The protochloruret of mercury, (calomel,) and the deutoxide, (red-precipitate,) enter into the composition of almost all the *anti-herpetic* ointments, comprised in the various formularies. Acidulated, saline, and alkaline lotions, as well as liniments with the addition of prussic acid, have been recommended in such affections as impetigo, gutta rosacea, etc. but further experience is wanted to confirm their utility.

Successful trials, he says, have been made to excite into greater activity certain inflammations of the skin, occurring in scrofulous habits, by stimulating them with hydriodated ointments. Advantageous results have been obtained from a combination of iodine and mercury, in the treatment of syphilitic tubercles and ulcers. The effects of mixtures endowed with such extreme activity, should be attentively watched.

Upon the subject of vesicatories and cauteries, often prescribed as derivatives in various chronic local inflammations of the skin, he remarks that they are constantly injurious in the general inflammation of the integuments.

Of the great number of internal medicines which have been employed in the treatment of cutaneous affections, our space permits us to notice but a few. Some of these, says M. Rayer, possess only negative properties. Such are the decoctions of barley, dogs-grass, (chiendent,) liquorice, etc. Others, such as the saline purgatives, calomel, diluted acids, appear to act by producing a transient revulsion upon the intestinal canal. Some have the reputation of *specifics*, the mercurial preparations, for example, when administered in syphilitic affections, to which they are doubtless extremely well adapted when judiciously administered.

The advantages to be expected from the preparations of gold, and the carbonate of ammonia, are very uncertain. Still more equivocal are the virtues attributed to sarsaparilla, scabius, bardana, patience, hedge-hysop, bittersweet, sumach, bark of the elm, the nettle, the expressed juices of horse-radish, scurvy grass, etc. The only thing which appears demonstrated in regard to these substances, is, that they have sometimes been successfully employed, and may be considered as having a general favourable action against those chronic affections of the skin, vulgarly designated under the name of *tetters.*

The preparations of antimony and sulphur have been extensively prescribed in affections of the skin, usually in combination with other substances of less activity. The obstinate resistance made by some of these disorders, to external treatment, has lead to the internal use of the arsenical preparations. Although experience has shown that affections of the skin which have resisted a multitude of other remedies, have yielded to their employment in a few weeks, it is nevertheless certain that in other cases they have been unsuccessfully exhibited for several months. He applies the same remarks to the tincture of cantharides, and thus concludes his observations upon both of these medicines. "It must not be concealed, that however skilful the physician who administers these active remedies, it may happen that the digestive organs shall become secretly the seat of chronic inflammations, the development of which will sooner or later take place. For, if the salutary action of these remedies only evince itself upon the skin, after its use for several months, may not the mucous membrane of the digestive organs become altered, in a manner so gradual and secret as not to be perceptible from external symptoms? For myself, I ardently desire that experiments made in another direction, may substitute for these energetic remedies, some external means, more direct, more rational, and less dangerous." G. E.

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5. *A Memoir on the Diagnostic Signs afforded by the Use of the Stethoscope in Fractures and in some other Surgical Diseases.* Translated from the French of Professor Lisfranc, with Notes and Additions by J. R. Alcock. London, 1827, pp. 46, 18mo. With a plate.

We do not belong to that class of individuals who run after every novelty—who believe the assertions of the discoverer are a sufficient guarantee for the value of what he has disclosed—and who, in their enthusiasm at a single success, place no limits in their imagination to the extent and importance of a discovery. On the contrary, we are disposed to view novelties in medicine with an eye of skepticism—to submit them to the severe scrutiny of reason and experience—and to satisfy ourselves of their value by numerous trials, before admitting their utility. Even at the risk, however, of being charged with having laid aside our usual caution in the present instance, or of not possessing the prudence we ascribe to ourselves, we do not hesitate to assert, that the stethoscope ranks among the most valuable acquisitions to our science, and that the extent of its usefulness is as yet far from being ascertained.

It is true, a complete practical acquaintance with mediate auscultation, is to be attained only after numerous trials, long experience, and persevering employment and study of the stethoscope. Those of the profession who have arrived at that age when it is disagreeable to *learn*, it can, therefore, hardly be expected will appreciate this method of diagnosis—the idle and careless, those who are unwilling to bestow the labour and attention necessary to understand it, will of course pronounce it useless and deceptive. But the industrious and ardent cultivators of medical science, those who wish to practice their profession conscientiously, and who think no labour too great, that will enable them to advance their profession, and alleviate the miseries of their fellow creatures—these will never regret the pains they may have bestowed on the study of auscultation, or be willing to forego the great advantages that it affords.

The stethoscope was first applied by Laennec to the elucidation of diseases of the chest, but its usefulness is not limited to those affections, M. Kergaradec has already made a happy application of it in doubtful cases of pregnancy. Laennec himself has recognised dropsies and internal aneurisms by means of it, and shown it to be of great use in verifying doubtful fractures and stone in the bladder.

M. Lisfranc, the eminent surgeon of La Pitié, in the interesting little work, the title of which stands at the head of this article, has, in addition to some highly important observations on the use of the stethoscope in fractures, added some new researches "on the diagnosis of biliary calculi, of extraneous bodies in the human sytem, in cases of dropsies, tympanites, caries of the bones, necrosis, or dead portions of bone, and, in fine, in cysts which contain bodies similar to the seeds of a pear or melon."

With respect to fractures, M. Lisfranc asserts, that except occasionally in those of the bones of the head, there are no longer any doubtful fractures. The crepitation may be heard by the aid of the stethoscope, when the slightest movement is produced, no matter how great may be the tumefaction. We need not dwell on the difficulty of distinguishing some fractures from dislocations, or the extreme pain that is often necessarily inflicted on our patients by the usual methods of diagnosis; the former is removed, and the latter avoided by the use of the stethoscope.

M. Lisfranc lays down the following rules for the application of this instrument:—

"1. When we apply the stethoscope upon the fracture, it is almost a matter of indifference whether the end or plug be made use of or taken out; but in proportion as the instrument is moved from the fractured point, the crepitation becomes more distinctly heard when the end is removed from the instrument.

"2. The more superficial the bones are, the stronger is the crepitation, slight movements are sufficient to produce it; it is more sensibly heard upon the fracture. Now, we not only prove the fracture of the bone, but further, we mark its place with precision. To know well this place, it is indispensable that the movements given to the broken portions should always be the same.

"3. The crepitation is less distinguishable in proportion to the distance from the fractured point, although in some instances it may be heard at distances nearly inconceivable to those who have not made experiments; in which case it must be observed, the crepitation is required to be rather loud.

"4. When a fracture exists with overlapping, the crepitation is less easily ascertained; if to an ear but little exercised, it should not appear very distinct, it would be easy to render it stronger, after having employed slight extension and counter-extension of the limb.

"5. The crepitation produced by fragments of the compact bones, furnishes harsh, rough sounds, strong cracklings, perceived by the stethoscope, they are often piercing, and sometimes greatly fatigue the ear.

"6. The crepitation of fragments of spongy bones is dull, and similar to the action of a file upon a hard and porous body, (pumice stone for example;) this noise is from time to time interrupted by sounds a little stronger, and which have a certain analogy to those of the crepitation of compact bones.

"7. The crepitation of oblique fractures is stronger than that of transverse fractures.

"8. If liquids be poured out around the fragments, a noise similar to that which the foot produces in an old shoe that contains water, is added to the crepitation.

"9. When the fracture is complicated by splinters, there is heard, with the ordinary crepitation, a sort of crackling, similar to that which a number of hard and angular bodies would furnish, if rubbed the one against the other.

"10. When the fracture exists with laceration of the soft parts, sounds are joined to the crepitation, which resemble those heard by strong inspirations and expirations, the mouth being always widely opened.

"11. Luxations cannot be confounded with fractures, for the sensation produced by displaced articular surfaces is slight, and scarcely heard, except on the very point of displacement: it is dull, and like that of two polished and moist surfaces moved one upon the other.

"12. The slipping of tendons in their sheaths furnishes sounds full, dull, jerked, unusual and very distinct from crepitation.

"We cannot finish these general rules without recommending, even persons habituated to the stethoscope sometimes to exercise their ears to the crepitation upon the dead body; for if we judge by our own experience, and by that of MM. Ricard, Kiegler, Michel, Van-mons, Accarie, and Gosteat, who assisted at the researches we have made, our first trials furnished us very obscure sensations."

In *fractures of the tibia* "the crepitation, though slightly perceptible at the back of the leg, may be heard over the whole extent of the thigh, upon the crest of the ilium, the sacrum, and even as far as the middle of the spine; but it is more distinct in proportion as we approach the fractured point: if the instrument be placed upon the point of the fibula, immediately opposite the fracture, the sound of the crepitation is less than in the whole length of the tibia; it is otherwise only half as strong as upon the precise seat of the fracture."

In fractures of the *inferior third of the fibula* "if slight pressure be made upon the line of the fragments, and recourse be had to the stethoscope, this crepitation is extremely distinct upon the seat of the fracture, it is less so on the middle part of the bone than on its head, on account of the presence of the muscles which cover the body of the fibula; for the same reason, it is more distinguishable upon the crest of the ilium than upon the thigh. When we listen to the point of the tibia corresponding to the fracture of the fibula, we hear that the crepitation is distant. When the stethoscope is placed upon the tibia, higher or lower than the fracture of the fibula, a very obscure sensation is afforded."

In fractures of the *middle portion*, the crepitation will be more easily distinguished upon the fracture than upon the head of the fibula, or upon the outer ankle.

In fractures of both bones of the leg, there will be perceived "sensations of multiplied surfaces, which rub one against the other; noise equally perceptible on the outer and inner side of the leg, very distinctly perceived as far as the middle of the vertebral column, but diminishing in proportion as the distance from the fracture is increased.

Longitudinal fracture of the *patella* is so difficult to be proved, that authors have scarcely mentioned its signs; with the stethoscope, a crepitation, more sensible upon the fractured point, is perceived on the slightest motion. In *transverse and oblique fractures of the patella*, the slightest movements, says Mr. L. will produce distinctly the ordinary crepitation of spongy bones. It is very necessary here to distinguish the crepitation from the sensation produced by the rubbing of the articular surfaces.

In *fractures of the thigh*, the crepitation is always heard more distinctly at the situation of the fracture than any where else, but it is according to M. L. perceptible through the whole extent of the limb, on the iliac crest, upon the abdomen, on the spine, and even upon the sinciput. It is perceptible upon the thorax, in which case, to the noise of respiration, deep, dull, and distant sounds are added.

The diagnosis of *fractures of the neck of the femur* is extremely difficult, and has perhaps occasioned as many mistakes as that of any disease. All difficulties however vanish when the instrument of M. Laennec is employed. "If we give," says our author, "slight movements to the limb, the crepitation is perceived; it appears as strong upon the anterior part of the iliac crest as upon the anterior region of the hip-joint. It is very remarkable upon the patella, and may be heard the whole length of the leg." M. L. adds, "the separation of the epiphisis of the head of the femur, the depression of the acetabulum, observed by *Ludwig*, ought to furnish a particular noise. I have no experience on these facts; I point them out to the attention of practitioners."

"I have long since said," remarks M. L. "that by touching the points of the *bones of the pelvis*, which are reached by introducing the finger into the rectum and vagina, we could better prove their fracture; but notwithstanding these means of investigation, some of these cases may be doubtful. Whenever the fragments admit of a little mobility, the stethoscope will inform you that there is fracture, and will indicate what part is the seat of it."

In *fractures of the radius*, we can perceive with the stethoscope the slightest crepitation, "which is more sensible on the place of the fracture. If we place the cylinder on the point of the wrist, diametrically opposite the solution of continuity, the noise is less than in the whole length of the radius: we hear it, however, as far as upon the humerus. "If we move the radius alone when it is fractured, we hear the crepitation; but if movements be executed afterwards only by the ulna, when that bone presents no fracture, there is no crepitation. This rule is equally applicable to the tibia and fibula.

"The rules which we have just indicated for the radius may be followed for the fracture of the ulna."

In fractures of both bones of the forearm, the crepitation is "more distinct upon the fractured point, as distinct on the inside as the outside of the limb: it may be heard as far as the superior part of the sternum, and its head. As in the leg, the crepitation gives the sensation of numerous surfaces rubbing against each other.

Fractures of the olecranon, when there is tumefaction of the soft parts, cannot be satisfactorily ascertained. This may, however, always be effected with the stethoscope; "the crepitation is more sensible upon the fractured place, more distinct upon the ulna than the radius, and easily perceived upon the anterior part of the joint.

In *fractures of the body of the humerus,* crepitation is "more sensible upon the fractured place, less distinct upon the forearm and upon the superior part of the humerus, scarcely perceptible on the upper part of the chest, and on the side of the head corresponding to the disease."

Fractures of the neck of the humerus have been confounded not unfrequently with luxation. M. Lisfranc says that it is too easy to appreciate the crepitation by means of the stethoscope, for this mistake to be committed in future. "The crepitation is more distinct on the fractured point, less upon the fleshy part of the shoulder, a little less on the sternal extremity of the clavicle and upon the superior part of the scapula, much less towards the fork of the sternum and the inferior angle of the scapula, little marked at the larynx, distinct the whole length of the limb."

In *fractures of the clavicle,* "the crepitation is more sensible on the place of the fracture, it may be heard the whole length of the limb, and upon the sternum; it is very distinct on the top of the shoulder, on the superior part of the scapula, and on the larynx; it is very perceptible on the inferior angle of the scapula, it is confused or indistinct on the lateral parts of the chest and on the middle of the spine."

In *fractures of the ribs,* M. L. remarks, "the inflammatory or œdematous tumefaction, the serous infiltration, or great degree of fulness, render the diagnosis of these fractures extremely obscure; of this we have often assured ourselves at the *Bureau Central* of the hospitals. The rather strong pressure that we are obliged to make on the ribs to assure ourselves of their fracture, join to the danger of wounding the intercostal artery the still greater danger of forcing the fragments inwards, and tearing the pleura and deeply injuring the lungs. Mediate auscultation prevents all these serious inconveniences to the patient. It furnishes a crepitation ordinarily dull or hollow, distinct from all those of the chest, and similar to the noise which the bottom of a hat makes when alternately depressed and raised. Sometimes the ordinary crepitation of bones is perceived."

Fractures of the scapula, both longitudinal and transverse, are difficult to recognise—"the stethoscope always enables us to hear the noise resulting from the mobility of fragments; it resembles that which two pieces of thin wood, the edges of which are slightly bevelled, sliding one upon another, would produce."

When there is considerable tumefaction, the surgeon may be much embarrassed in ascertaining *fractures* of the acromion—the cylinder removes this difficulty. On moving the scapula, the crepitation is very distinct, and perceived over the whole extent of the scapula and arm: it is obscure on the sternum.

Fractures of the vertebræ have been often confounded with their luxations. M. L. asserts that "the slightest movements suffice to make the crepitation distinguishable by means of the stethoscope. It is always more distinct on the fracture, and ordinarily is only heard at a short distance from this point."

When there is tumefaction without displacement, mistakes are often made in *fractures of the jaw;* they may be distinguished, according to M. L. in every instance by the aid of the stethoscope. The crepitation will be always more sensible over the place of fracture: it may be heard all over the head, and even upon the larynx.

It is unnecessary to remark how difficult it often is to ascertain fractures of the skull; M. Lisfranc says that whenever the fragments submitted to pressure allow of a slight degree of motion, he is convinced by trials made upon animals, that the stethoscope will enable us to hear the crepitation, and will even indicate the place of the fracture."

In fractures of the condyles of the humerus and femur, of the maleolus internus, &c. the stethoscope furnishes the noise of the crepitation of spongy bones, combined with that of the sliding of articular surfaces upon each other.

There are some fractures not particularly noticed, as the general rules laid down, apply to them.

"No one is ignorant," observes M. Lisfranc, "that the illustrious Desault himself mistook a fungous tumour of the bladder for a calculus: it is also evident that patients have sometimes undergone the operation when no stone has been found. I believe that the stethoscope will put us beyond the fear of this misfortune for the future. That it may furnish more distinct sensations, we apply it, with the plug removed, upon the body of the pubes, and on the posterior part of the sacrum; then if the catheter be introduced into an empty bladder, and it contains no calculus, the regular movements that are given to this instrument enable us to hear sounds, which resemble those of a forcing pump put in action.

"The sounding instrument sometimes produces in the bladder, containing little urine, the noise of the saliva agitated in the mouth; but whenever there exists a calculus, one hears a kind of clicking, or slight shock, extremely distinctly; or rather sounds similar to those afforded by the action of a file on a hard body. The slightest movements given to the catheter, give the last sensation which we have just mentioned.

"We have placed soft parts in the bladder, and the cylinder has not furnished us with other sounds than those we have indicated when the bladder is empty, or when it contains little urine. Professor *Serres,* who was good enough to assist in our researches, was, as well as ourselves, convinced of the fact."

There are no characteristic signs by which the existence of *biliary calculi* can be known: M. Lisfranc thought that the stethoscope might enable us to recognise them, and he tried a number of experiments, but without success; in a subject, however, the liver of which extended slightly beyond the ribs, pressure made upon and around it occasioned a noise similar to that of little stones closely packed, sliding the one upon the other; the autopsy showed three little biliary calculi.

In tympanites "when the stethoscope is applied upon the abdomen, and we tap lightly the walls of this cavity, we perceive a noise perfectly similar to that of a drum heard from a great distance."

M. Laennec has recognised ascites by the stethoscope. Mr. Alcock remarks that "when there is great distention of the cellular membrane in *anasarca,* the fluctuation is distinctly perceptible by the stethoscope: care must therefore be taken to avoid error in the diagnosis, lest the operation of tapping should be performed unnecessarily. In *ascites* the fluctuation is still more distinct."

When there is only a small quantity of fluid in the joints, its existence cannot be readily ascertained by the ordinary examinations, but upon applying the stethoscope the shaking of the fluid may be heard.

In *hydrocephalus* when the fontanelles are still in existence, or if there be any separation of the sutures, the cylinder will furnish a sensation like that of the shaking of fluids. The same sensation will also be perceived in *dropsy of the spine* when there is separation or destruction of the posterior part of the vertebral column.

Hydrocele, hernia, and the enlargements of the testicle are often extremely difficult to be distinguished. Mr. Alcock has by means of the stethoscope, been enabled to decide that cases of disease, supposed to be of the testicle, in which, from their long continuance, the coverings had become so much thickened as to preclude the usual test of transparency, were instances of hydrocele, and not of disease of the testicle. By placing the stethoscope upon the swelling, and tapping or gently striking the opposite side, as by a slight flirt with the finger, the fluctuation is distinctly perceptible to the ear.

"In diseases of the testicle the sound is dull and scarcely audible. The same in omental hernia; whilst in large scrotal hernia, containing intestine partly distended with air, the tympanitic sound is readily perceived.

If the existence of extraneous bodies in the ears, nostrils, pharynx, œsophagus, rectum, vagina, uterus, and in wounds, cannot be proved by known means, the probe and the stethoscope will easily make them perceptible, if the bodies be sufficiently sonorous.

Professor Laennec has obtained important data from his stethoscope, to establish the diagnosis of internal aneurisms. M. Lisfranc intends hereafter to publish a memoir on this subject.

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6. *Coup-d'oeil sur les Maladies les plus importantes qui règnent dans une des iles let plus célèbres de la Grèce, ou topographie médecale de l'ile de Leucade, ou Sainte-Maure.* Par Alph. Ferrara, M. D. &c. Paris, 1827. 8vo. pp. 68.

Dr. Ferrara was physician to the English army, and to the Hospital of St. Maure, and resided seven years in the Ionnian Islands. In the present work he has given a brief sketch of the topography and prevailing diseases of St. Maure, and intends hereafter to treat of these subjects more at large.

The small island of Leucadia, so well known to every classical scholar, is about thirty miles in length, by fifteen in breadth; is situated near Actium, and appears to have been formerly united to the main land; it contains about sixteen thousand inhabitants; its climate is rendered unhealthy by the constant humidity of the air, the great heat of the summer, and above all, by its numerous marshes. The combined effects of these agents are strikingly visible in the inhabitants, who are in general pale and feeble, and extremely liable to affections of the abdominal viscera.

The prevalent diseases as mentioned by our author, are tetanus, peripneumonia, tubercular consumption, scrofula, ophthalmia, colitis, intermittent fevers, and scurvy. Scrofula is endemic. Intermittent fevers are the great scourge of the island, inducing engorgements of the abdominal viscera, ascites, &c. Scurvy is also endemic; our author denies that the great cause of this disease is the constant use of salted provisions, and adduces as evidence of the correctness of his opinion, the fact, that the Russian peasants who, for a great part of the year live on salted meat alone, without any vegetables, are rarely if ever attacked by it.

QUARTERLY PERISCOPE.

FOREIGN INTELLIGENCE.

ANATOMY.

1. *Congenital absence of the Gastrocnemii Muscles.*—M. **Paletta**, in the first volume of his *Exercitationes Pathologicæ*, relates three cases in which the gastrocnemii muscles were absent.

2. *On the Bilious Apparatus.*—M. **Amussat** has presented to the Royal Academy of Medicine, the following results of his investigations respecting the anatomy and physiology of the biliary apparatus. 1st. There exists muscular fibres in the gall bladder and biliary ducts. 2d. There exists in the cystic duct a spiral valve, which causes the bile to ascend from the hepatic duct into the gall bladder, and opposes the ready exit of the bile from the cystic duct. 3d. This effect is favoured by the conical termination and narrow opening of the ductus choledochus, which has been shown by M. Amussat, by injecting water through the hepatic duct. 4th. The pancreatic duct always opens in the ductus choledochus, and never into the duodenum.—*Ann. de la Méd. Phys. Oct.* 1827.

3. *Cerebro-Spinal Fluid.*—M. **Amussat** has presented to the Academy of Medicine a very interesting anatomical preparation, showing that the cerebro-spinal fluid is not contained, as was formerly supposed, in the cavity of the arachnoid, but interposed between the arachnoid and pia mater. If the first supposition were correct, the fluid could not penetrate into the ventricles without a rupture, whereas it penetrates by the opening of the fourth ventricle. M. A. has also proved that the nerves have two neurilemas, as already announced by M. Larrey.—*Ibid.*

4. *Malformation.*—Post mortem examination of a female aged fourteen years. Umbilicus in the natural situation of the mons veneris; anus where the opening of the vagina is usually placed; its orifice is so large as to admit the introduction of the hand. No apparent communication between the rectum and organs of generation. No exterior trace of those organs, but a projection, the structure of which is somewhat analogous to that of the clitoris, and two small excrescences similar to warts, and covered with hair. In place of the symphysis pubis, there is a considerable space which is covered only by integuments. The bladder is wanting; the urachus very large and long, loosing itself insensibly in the integuments. The uterus of its natural size, perfectly formed, as also its ligaments, the ovaries, and the fallopian tubes. No ureters or kidneys; but the umbilical vein was much larger than it is found in adults.

From its birth this girl had suffered great inconvenience, from the constant flowing from the umbilicus of a liquid resembling urine, and which had so powerful an odour, that it was necessary to change frequently the cloths which covered this part. From the absence of kidneys, ureters, and bladder, Dr.

Moulon, of Trieste, who relates this case, thinks, that we ought to conclude, that the blood was freed in the liver of the principles which constitute the urine, and that these were conveyed by the umbilical vein, and excreted by the umbilicus.—*Journal des Progrès, Vol. VII.* 1828.

PHYSIOLOGY.

5. *Report made to the Philomathic Society of Paris, by* Dr. **Edwards**, sen. *and* M. **Jules Cloquet**, *on a Memoir transmitted to the Society by* Dr. **Barry**, *and entitled, "On the Application of the Barometer to the Study of the Circulation of the Blood, and of Respiration in the Vertebrated Animals."*—"The Society has charged us, M. Jules Cloquet and myself, to report upon a memoir written by Dr. Barry, and entitled as above. As the reading of the memoir was anterior to the nomination of its author to be one of our corresponding members, we cannot omit the report which we have been desired to make; and we are the less inclined to this omission, because we are convinced that the Society will listen with interest to the results of the experiments which Dr. Barry has repeated.

"As these experiments are founded on physical principles, we entreated MM. Ampère and Savart to be present. Though we could not entertain any doubts as to the results of the experiments already performed by Dr. Barry, before MM. Cuvier and Dumeril:—viz. that the pressure of the atmosphere contributes to the progression of the venous blood towards the heart during inspiration; yet we were anxious to ascertain, at least approximately, to what extent this cause operates. For this purpose Dr. Barry repeated the following experiments:—

"He introduced one end of a bent glass tube under the posterior extremity of the sternum of a pigeon placed upon his back, and pushed it as far as the region of the heart. The other extremity of the tube was immersed in a vessel containing a coloured liquid. When the animal inspired, the liquid rose in the tube, and descended when he expired. M. Savart, who measured the height of the ascent of the liquid, estimated it at two centimetres. As the tendency to vacuum takes place during inspiration, it follows, (abstraction being made of all unforeseen disturbing causes,) that, according as the entrance of the air may be more or less free, the afflux of blood to the thoracic cavity will be in an inverse proportion—that is to say, the more freely the air enters into the lungs, the less blood will arrive in the cavity when the tendency to vacuum is established, and *vice versâ.* We wished to see the proof of this by experiment, because, in the complicated animal organization, the results, which may be rigorously inferred from certain well-attested facts, are not always produced by the experiments undertaken to verify them, and because the confirmation of this consequence would form the basis of an important application to pathology, as we shall presently see. Whilst the animal was circumstanced, as I have already stated, Dr. Barry slightly compressed the trachea, and the liquid rose higher than in the other experiment, when the air had a free entrance. As the pressure was increased, the liquid rose higher and higher, and, when the trachea was entirely closed, the liquid rose so as to fill the whole tube, which was six inches long. This experiment shows clearly the truth of the general principle, and also the important part which the pressure of the atmosphere plays in pathological cases, when the entrance of the air is rendered more difficult by partial obstruction, or narrowing of the air-passages.

"A modification of this experiment presented to us a curious phenomenon, which we shall state *en passant,* thought it has no reference to the principles which Dr. Barry endeavours to establish in his memoir.

"Leaving one end of the tube in the thorax of the animal, Dr. Barry removed the other end from the glass containing the coloured liquid, that it might communicate freely with the atmosphere; at the same time he tied the trachea, so as to prevent completely the entrance of air into the lungs. Air, however, penetrated into the thorax by the end of the tube which communicated with the atmosphere, but did not penetrate the lungs. Yet the animal, instead of dying almost suddenly, (as happens when the trachea is closed without employing a tube, as in this experiment,) continued to live without any convulsive movement, and apparently as if he still respired by the trachea. We remarked, however, that the capillaries had not their natural colour, and that the skin inclined to violet. The air which entered the thorax was in contact with the surface of the lungs, and produced in the blood the changes necessary for the support of life, but in a proportion less than in a state of health.

"The other series of facts which we had to verify, referred to the influence of atmospheric pressure on the motion of the blood in the cold-blooded vertebrata. The individual made use of was a frog. The dispositions for the experiment were the same as in the case of a pigeon: that is to say, a bent tube of glass was introduced under the posterior extremity of the sternum of the animal placed on his back. The tube was pushed as far as the anterior region of the heart, whilst the outer extremity was immersed in a coloured liquid. During the respiratory movements of the frog, there was a motion of ascent and descent of the liquid in the tube, of about two millimetres.

"It was not thought necessary that Dr Barry should repeat the experiment upon the snake, because the mechanism of respiration in the ophidian class very much resembles the manner in which birds produce a vacuum during inspiration. Experiments similar to those repeated upon the pigeon would necessarily afford analogous results. He wished, however, that one of us should witness the experiment: it was repeated, and the results agreed with the deduction we had formed from the experiment upon the pigeon.

"We did not repeat the experiment which goes to prove that there is, in the pericardium of fihes, a tendency to a vacuum caused by the locomotion of the heart, because, according to the details of this experiment, the action is so weak that it is marked only by a change of curve on the surface of the mercurial column in the barometer.

"Dr. Barry showed to one of us experiments which tend to prove that there is another force accessory to that of the heart which contributes to the centrifugal, or outward, motion of the blood in fishes. As these experiments are not stated in the memoir, the object of this report, we purpose to communicate them to the Society upon another occasion.

"Dr. Barry requested one of us to witness an experiment intended to ascertain the extent to which the inspiratory efforts of a middle-sized dog can bring down the mercurial column in a barometer. For this purpose, he fitted one end of a flexible tube into the thoracic opening of the divided trachea of a dog, the other end into an opening made in the reservoir of a barometer. During the strongest inspirations, the barometric column descended about five inches, and remained there for a moment."—*Lond. Med. and Phys. Journ. Dec.* 1827.

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6. *On the Regeneration of Nervous Tissue.*—"In 1825, M. Prevost divided the left pneumo-gastric nerve in five kittens, newly brought into the world, and removed a portion of about six millimétres from each nerve. None of the animals appeared to be affected by the operation, and the wounds cicatrized very rapidly. A month after, the right pneumo-gastric was divided in one of them; the animal appeared suffering; it often gaped and uttered a hoarse cry. Respiration was impeded and slow, and death took place about fifteen hours after the operation. The two ends of the left pneumo-gastric, divided a month previously, were swelled, directed towards each other, and filled up between by a white tissue very similar to thick and disfigured neurilema. It appeared that this tissue did not propagate nervous action. A month after, the right pneumo-gastric of another of the kittens was divided, and the animal died thirty-six hours after the experiment. The nerve of the left side in this case

also had its ends intervened by a substance similar to that described in the last.

"Two months later, the operation was practised on the third kitten, which was now four months old; it was very little affected, and two days after it was quite well. M. Prevost operated next on the fourth animal, the only one remaining, the fifth having perished through an accident, and the experiment was followed by the same result as in the third case. After fifteen days, the *right* pneumo-gastric was divided again in the first of the two cats which survived, immediately above the place where the division was made before. The animal sustained the operation well; respiration was not impeded. Thirty-six hours after, the nerve of the left side was again divided immediately above the first section; death took place about thirty hours after this operation, as if both nerves had been divided at the same time. In dissecting the divided nervous trunks, M. Prevost observed that the upper and lower extremities of the left nerves were united in each animal, by a white, hard substance or swelling, on which the neurilema appeared thickened. Having removed the neurilema, and pressed the rest between two pieces of glass, he observed, by placing it under the microscope, that, from the superior trunk, nervous bands extended through the interposed substance to the inferior trunk; indicating thus that the integrity of the nervous tissue was restored. He could not discover any of these nervous fasciculi in the recent cicatrices.

"From the above facts, M. Prevost deduces the following conclusions:—1st. When the nerve is divided, it does not suffice, in order to re-establish its action, that the two portions should unite by a white, cellular interposing tissue, for this soon occurs.

"2d. Through this substance, nervous bands shoot out and extend from the superior to the inferior portion.

"3d. This prolongation of nervous matter does not appear to take place for some time. The prolonged bands have no regular arrangement as in the natural continuity of the nerve; on the contrary, they separate from each other, as if their growth through the interposed substance had been obstructed."—*Bulletin des Sciences Med.*

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7. *On the cause of Death after the Ligature of the Eighth Pair of Nerves.*—"Professor Mayer, of Bonn, has investigated this interesting subject experimentally; and he infers that, in almost every instance, unless some of the accidents presently to be mentioned, intervene, death is owing to the blood in the heart and lungs losing its power of continuing fluid. If the animal, says he, dies soon after the nerves have been tied or divided, the cavities of the heart, and the arteries and veins of the lungs, are found after death filled with a soft coagulum of black blood. But when death does not ensue for forty-eight hours or upwards, then the clots are firm, white, fibrinous, free from colouring matter, and they pervade the pulmonary vessels to their minute ramifications. These concretions, he thinks, are formed during life, and are the cause of death; and they are owing to the blood, in consequence of being withdrawn from the operation of the nervous influence, tending to separate into its proximate principles as it does after death. The value of the author's experiments is very much depreciated in our eyes, by his not having stated the period after death within which these polypoid concretions were met with. It is well known that similar concretions are often found in the human subject, and though some pathologists believe they occur during life, nay are even sometimes the immediate cause of death, the more general doctrine is that they are a pseudo-morbid appearance altogether, and do not occur till after death. In order to prove that the concretions observed by Professor Mayer are not, as the phenomena now mentioned are generally conceived to be, the product of operations after death; he ought to have examined the bodies of the animals on which he experimented immediately after death, or rather when death was approaching. If fibrinous concretions are found in such circumstances, it is unnecessary to point out

the light which the observation will throw on many analogous pathological phenomena. In making experiments for ascertaining this point it is important to attend to the accidental causes of death which have been pointed out by the physiologist of Bonn. They are in the first place the passage of the food into the trachea, in consequence of the paralysis of the constrictor muscle of the cardia, and the muscles of the glottis; and secondly, a more rare accident, emphysema of the lungs and thoracic cellular tissue, probably caused by rupture of the bronchial mucous membrane during the violent efforts sometimes made to inspire.

Professor Mayer has farther made some valuable observations on other more subordinate effects which result from ligature or division of the eighth nerves. He agrees with the late experiments of Breschet, Vavasseur, and Edwards, who observed that, contrary to the statements of Wilson Philip, digestion is not essentially impaired. He found that the animal temperature was not diminished by the operation, or at least not nearly in proportion to the diminution of the breathing. But the most remarkable phenomenon he has mentioned, is the invariable and extraordinary discrepancy in the effects of the operation on the breathing and on the action of the heart; while the respirations are diminished in number to a half, a third, or even only a sixth of their natural frequency, the pulsations of the heart are doubled or quadrupled in frequency. The cause of this discrepance he thinks is, that the obstruction caused by the concretions in the pulmonary vessels necessitates an increased and more frequent action of the heart, in order that a sufficient quantity of blood may be transmitted through them."—*Edinburgh Med. and Surg. Journ. Jan.* 1828, *from the Zeitschrift für Physiologie. Erstes Heft*, 1826.

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8. *On the Narcotic Properties of Carbonic Acid Gas.* By M. Collard de Martigny.—"Physiologists and toxicologists have long agitated the question, whether the deleterious properties of the carbonic acid gas are owing to its being a positive poison, or a simple asphyxiating gas; and it is important to determine the question, as some material conclusions result in regard to the treatment. The experiments and opinions of Bichat and Nysten had led to a general, but we have long thought an erroneous belief, that it is no more a poison than azote or hydrogen, and that it causes death simply by the exclusion of respirable air. The following experimental arguments contained in a paper by M. Collard de Martigny prove that it is a true narcotic poison.

"1. If carbonic acid instead of azote, be mixed with oxygen in the proportion of the constituent gases of atmospheric air, animals cannot breathe it for a minute or two, without being attacked with all the symptoms of narcotic poisoning. If the proportion be even reversed, so that there are seventy-nine parts of oxygen, and only twenty-one of carbonic acid, the effect is similar. Nay, animals will die in a few minutes even in a mixture of atmospheric air and carbonic acid, which will support combustion; and persons have been taken out insensible from pits, where lights left behind them continued to burn. 2. Simple asphyxia, from the deprivation of air or substitution of hydrogen or azote, does not prove fatal to man in less than four or five minutes, to some other warm blooded animals in less than fourteen minutes, to fishes in less than an hour, to frogs in certain circumstances in less than five days. Now an atmosphere of carbonic acid gas kills the perfect animals in seventy seconds; water impregnated with it often kills fishes in the course of six minutes, and frogs in fifteen or twenty-five minutes; and the latter animals perish in an atmosphere of the gas in even a shorter time. 3. The narcotic symptoms caused by inhaling the gas may be also produced by its application to other surfaces, besides the pulmonary mucous membrane. Persons accustomed to live abstemiously have been intoxicated by drinking mere aërated water. If the body be enclosed in an atmosphere of carbonic acid gas, with due precautions for the maintenance of the breathing, the usual symptoms of poisoning with carbonic acid are produced—sense of weight in the head, indistinct vision, pains in the temples, ringing in the ears, giddiness, exhaustion, an indefinable feeling of terror; and if this experiment be continued long enough, death will be the consequence, as M. de Martigny proved upon animals. 4. The symptoms caused by immersion in an atmosphere of carbonic acid gas are quite different from those caused by immersion in hydrogen or azote. If an animal is plunged in hydrogen for two minutes, it recovers in a few minutes either spontaneously or with the aid of insufflation of air. But immersion for that length of time in carbonic acid gas either kills it outright, or leaves it under symptoms of narcotic poisoning, which the most vigorous treatment does not always remove till many hours have elapsed. These arguments appear quite decisive of the positively poisonous action of the gas. The paper is closed with some judicious remarks on the treatment of poisoning with carbonic acid. The only novelties are a recommendation of ammonia and other stimulants in the form of injection in preference to any other way of applying them, and a denial of the danger mentioned in our last number, as having been remarked by M. Leroy d'Etiolles, to be caused by too strong insufflation of air into the lungs. M. de Martigny could never remark in dogs the dangerous effects of brisk insufflation noticed by the latter gentleman; and indeed, M. Leroy has since acknowledged, (Jour. de Chim. Méd. iii. 354,) that he was led into error in his experiments —that the sheep is thus injured, but not the dog."—*Ed. Med. and Surg. Journ. Jan.* 1828, *from the Archives Générales de Méd. June*, 1827.

9. *Case of Premature Growth.*—"B. Eckhofer, born in 1806 of healthy parents: her mother had six children, all of whom had been very robust. At birth, she was twenty-three inches long, and weighed about two pounds more than usual. The fontanelles of the cranium were not at all ossified. From the eighth day the mother's milk was found insufficient, and broth was given. A fortnight after birth, four teeth appeared; but, excepting the unusual size of the child, nothing extraordinary was remarked until the seventh month, when she was weaned; and, although her food was not of a very digestible quality, her health continued good. She now began to walk. The incisor teeth protruded through the gums, and the hair, which had hitherto been fair, became dark, and grew so fast as to reach the middle of the back. At nine months old she menstruated, and, in fact, exhibited every sign of puberty. The first time, the discharge continued for seven days, and occurred regularly until her death, which took place when she was twelve years of age. After the ninth month she did not for some time grow so rapidly, but at six years of age she was three feet nine inches in height, and weighed fifty-four pounds. It is remarkable that, notwithstanding the general development of the body, and of the organs of generation in particular, she never exhibited any sign of sexual instinct."—*Allgemeine Deutsche Leits. für Gebackskunde.*

10. *How to procure Animals of either Sex.*—"M. GAROU DE BUZAREINGUES published, in 1825, some experiments relative to the reproduction of various domestic animals, more particularly of sheep. In a late number of Magendie's Journal, he has resumed this subject, and has related the result of some experiments made with two separate flocks of sheep. In addition to these, there are many observations on the same subject applied to mares and cows; but the most important relate to sheep.

"A flock of sheep was divided into two equal portions, and a smaller or greater number of male or female lambs were to be produced, at the will of the proprietor, in each of these. The plan adopted in order to insure this result, was to employ very young rams in that division of the flock from which it was desired to obtain females; and strong and vigorous rams, of four or five years of age, in that from which males were to be procured. The first division was also recommended to have a more abundant supply of food, and more repose than usual, during the period of impregnation. The following table will show the effect of the first experiment:—

Age of the Mothers.	*Sex of the Lambs.* Males.	Females.
2 years	14	26
3 years	16	29
4 years	5	21
5 years and upwards	18	8
Total	55	84
At another farm:—		
2 years	7	3
3 years	15	14
4 years	33	14
5 years and upwards	25	24
Total	80	55

"Another experiment is thus related:—A flock of 106 sheep was divided into two sections of forty-two each, one containing the strongest ewes, of four and five years of age; the second, consisting of the weakest, either less than four or more than five years old: the first section was intended to produce a greater number of females than the second; and after having been marked, and placed in a good pasturage, four rams, of about ten months old, were turned into them. The other section received two strong rams, each aged more than three years. The remainder of the flock, making up the number of 106, belonged to the shepherds; they are generally stronger and better nourished than the rest, and these, forming a third section, were placed under circumstances similar to the second.

"The result of the lambing was thus:—

	Males.	Females.
First section	15	25
Second section	26	14
Third section	10	12
There were four double births; two of which, in the first section, produced		4
The two others, belonging to the second and third sections produced	3	1

"It is to be remarked, that the lambs proceeding from the section in which the young rams were employed, were in all respects as fine as those begotten by the older and stronger rams.

"In connexion with this part of the subject, we find, in another part of the communication, a remark of some importance. In 1825, twenty ewes, which had not borne for two years, received the rams clandestinely in the beginning of the winter; they were almost all of them remarkably fat; they produced sixteen females and four males. Among the number of these ewes were two old ones, which had been put up to fatten in 1824, but could not be sold because they were not in sufficiently good condition: these gave one male and one female.

"M. Garou next carries his inquiries to the reproductive power in the mare and cow. Respecting the first of these, he observes, that, wishing to obtain more female than male colts, he fed his brood mares on fresh food; that he chose for propagation only such as had not been foaled or even nourished by the mother the preceding year; and he did not give them the stallion until they gave evident signs of being in heat. Five mares, so chosen, produced five female colts; and, by following the same method, out of thirteen colts foaled that year, eleven were females; and one of the two males was the product of an old mare. He remarks, that some mares of a remarkably vigorous appetite always bring forth females; whilst those of delicate health as constantly produce males. The same remarks apply to the cow."—*Lond. Med. and Phys. Journ. February,* 1828.

PATHOLOGY.

11. *Case of Malformation of the Heart.* By **H. W. Carter, M. D.**—R. P. æt. twenty-four, a brick layer, was admitted January 27th, 1826, into the Kent and Canterbury Hospital, with the following symptoms: palpitation—shortness of breath—much distress on making more exertion than usual—troublesome cough with copious expectoration—countenance of a purplish hue—lips very dark—expression anxious—pulse regular, about ninety—tongue furred—urine scanty—bowels tolerably regular—disposition to anasarca of lower extremities. Complaints had been coming on for some time. Various remedial measures were employed, but without any very decided benefit. He, however, improved by rest and quiet, and was discharged on the 6th March. On the 17th of the following November, he was again admitted; the symptoms above enumerated more urgent, except that the cough was not attended with expectoration. There was a distressing sensation of faintness at intervals; fluttering of the heart, and at the epigastric region—inability to bear the recumbent posture—sleep disturbed by frightful dreams. Examined with the stethoscope: the action of the heart was very perceptible over the whole of the chest—impulse considerable—sound very loud, so much that the state of the respiration could not be ascertained. Various remedies were tried without affording relief. He died suddenly in February, 1827. On examination after death, the heart was found "enlarged, particularly the right auricle, which, together with the right ventricle was distended with blood, and contained several large false polypi. In the septum ventriculorum a small aperture was discovered at its upper part, which just admitted the end of the smallest bougie, but was not large enough to admit the bulb of a silver probe. Just over the aperture was a little valvular formation, apparently an attempt of nature to remedy the defect. The valves were all in a natural state.

"Right lung universally adhering to the pleura costalis, but free from disease. Left lung gorged with blood; the inferior lobe larger than natural; air cells distended and enlarged, and one or two air vesicles attached to the edge of the inferior lobe.

"The abdominal viscera were all healthy. The liver rather larger than ordinary.

"Head not examined."—*Lond. Med. Repos. and Rev. Feb.* 1828.

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12. *Case of Aneurism of the Aorta, bursting externally through the Mamma.*—Mr. Rainy, senior pupil of the Aberdeen New Dispensary, reports the following case. July 15th, 1827, a widow, aged forty-eight—spare habit of body—tall—remarkably narrow chest—subject for the last two years to palpitation on the smallest exertion. "Nothing unusual, however, was observed till a twelvemonth since, when she complained of difficulty of breathing and excessive paroxysms of coughing. At that time, the pulsation of the heart could only be felt between the fifth and sixth ribs. The carotid artery, however, pulsated very strongly, so as to be seen by the bystanders. Pulse at these times was unusually quick and small. Digitalis and squill removed the first attack.

"In October last she was again affected in the same way: the palpitations had, however, become more distressing; pulsation could be distinctly felt at the left side of the epigastrium. The throbbing of the carotid was less distinct. Relief was again procured by squill and digitalis; thin mucus being expectorated.

"Two attacks succeeded, the symptoms being similar, though of longer duration, and yielding less readily to the remedies employed.

"For the last five months, she has been constantly attended from the Dispensary. The symptoms have been violent palpitation of the heart, perceived both at the epigastrium and, (though less distinctly,) below the angle of the left scapula; most distressing sense of sinking on the approach of sleep, and starting after it had come on; cough severe, and still recurring in paroxysms; very scanty expectoration; difficulty of breathing, only occasionally occurring, and relieved readily by a draught of camphor mixture, with ether and opium, which frequently procured good nights.

"This state of the symptoms continued till June last, when the fourth and fifth ribs, at their anterior extremity, were perceived to be more prominent than usual, and gave extreme pain on being touched, however gently. From that time to the present, the fulness has increased till the whole of the left has become distended with it. The cough and occasional dyspnœa are settled symptoms, and the mucous rattle more or less distinctly heard by the unassisted ear.

"Two days ago, the anterior part of the tumour was observed to be discoloured, when several layers of adhesive plaster were laid over it. This morning, however, the blood burst out at a large opening, which terminated existence in a few seconds. After the appearance of the tumour externally, the pulse had sunk rapidly in strength, and a few small bleedings, which had been employed, were obliged to be discontinued, as an alarming state of faintness occurred immediately on opening the vein. The digestive organs continued healthy to the last, and a small quantity of food was relished on the day of her death. A full meal always produced distressing sense of sinking, and was thrown off on the occurrence of the first paroxysm of coughing.

"*Dissection*, 17th July.—Body much emaciated, completely exsanguineous; left mamma purple, with an opening externally, the size of a penny; bulk of mamma greater than in the prime of life. On enlarging the opening into the aneurismal sac, it was found filled with a firm coagulum; a soft membrane lined its internal surface, easily lacerated at the fore part, but firmer towards the bottom of the cavity. Integuments of mamma unusually firm; between them and the sac a layer of coagulated blood, increasing in thickness as it recedes from the outer opening. Cavity large enough to hold an orange, communicates, by an opening of an inch in diameter, with the interior of the chest, the upper and under edges of which were formed by a breach, (by absorption,) in the edges of the third and fourth ribs. On removing the sternum and anterior ends of the ribs, so as to leave the connexion of the external disease with the parts within the chest undisturbed, the opening was found to lead directly to the ascending aorta. This artery had its diameter increased to four inches, internal measurement, at this part; at its rise from the left ventricle, its coats are thickened to half an inch, and its diameter one-half greater than usual. Opposite to the fourth rib, its size and thickness is most increased, diminishing rapidly to where it takes its bend, where, after giving off the carotid, it becomes healthy; and, from the left ventricle to its arch, the aorta has bands of a cartilaginous texture, running through its walls in different directions, and on its outer surface appear depositions of coagulating lymph. The heart is considerably enlarged, but particularly its left side, where its coats are very much thickened. Left auricle and ventricle empty. Walls of the right ventricle thinner and paler than natural, and the musculi pectinati of that auricle uncommonly pale, and very thin. The other contents of the chest are healthy. The left lung small. Carotid artery somewhat enlarged in its diameter, and thickened. No other diseased appearances in the viscera.

"*Remarks.*—The above case is valuable as illustrating the possibility of a true aneurism, and still more as exhibiting the complication of that form with the false. There was a tumour in the region of the carotid, with pulsation, which it will be perceived had disappeared for some time before death—*there being some dilatation, but no aneurism of that vessel.* From the heart to the arch of the aorta, that vessel was enlarged greatly in its diameter; its coats much thickened. An opening at its anterior side communicated with an aneurismal sac, lined by several layers of coagulated blood, and which at last burst outwardly. It is surprising that such extensive disease produced so little disturbance in the system."—*Lond. Med. and Phys. Journ. December*, 1827.

13. *Cases of False Consecutive Aneurism of the Heart, and True Aneurism of the Arteries.* By G. Breschet, M. D. P.—"False consecutive aneurism of the heart is a disease much less known than other maladies to which that organ is liable. In the general description of the diseases of the circulating system, it is remarkable that this species of aneurism of the heart has been considered never to occur. Authors have confined themselves to the history of cases in which there existed a dilatation of the ventricles or auricles, with either an increase or diminution of the parietes; but aneurisms of the heart, accompanied by rupture, have not been mentioned. The reverse is the fact with respect to the arteries. Most pathologists have disputed the simple dilatation of these vessels without rupture of one or more of their coats, and have not been inclined to admit the existence of true aneurism from arterial dilatation. The object of M. Breschet's memoir is to prove, by cases, the existence of both these varieties of aneurism. A plate is given of the appearances detected on dissection in the heart of the celebrated Talma. At the apex of the heart was found a considerable enlargement, which was lined by the pericardium. The left ventricle was dilated: its parietes had suffered no perceptible alteration. The cavity of the ventricle was sufficiently enlarged to admit a hen's egg of an ordinary size. At the inferior part of the ventricle there was a communication, with a round pouch, by means of an opening about an inch in diameter. This communication between the ventricle and aneurismal pouch was established by means of a thick cartilaginous band, (*virole.*) This band gradually became thinner, and terminated in a membrane which mingled with the laminæ of the pericardium, and constituted the aneurismal pouch. It was ascertained upon a further examination that the internal membrane of the heart was ruptured. In fact, false consecutive aneurism of the heart existed. In the ten cases introduced into this memoir, there is one part which merits attention. Most of the aneurisms were found at the upper part of the left ventricle. M. Breschet believes that no such appearance has ever been detected in the right ventricle; and he infers, therefore, that the disease depends upon a purely mechanical cause. The upper part of the left ventricle has to maintain the powerful contractile efforts of the heart, and is much more likely to yield than the right, which, equal in strength, has much less violent action to support. The difficulty of determining the manner in which the disease is originally formed is acknowledged. The progress of false consecutive aneurism of the heart is slow and gradual. It would appear, that, in some cases, many years have elapsed between the commencement and perfect formation of the disease. The above is but a brief abstract of M. Breschet's paper, from which the following general conclusions may be deduced:—

"1. That false consecutive aneurism of the heart is generally situated in the left ventricle.

"2. That the apex of the heart is the most ordinary seat of the disease.

"3. That this affection is certainly an aneurismal tumour.

"4. That this aneurism, from the mode of its formation, the state of its parietes, and the contents of the cyst, closely resembles false consecutive aneurism of the arteries, in the sense given by Scarpa to the term aneurism.

"5. That the heart may be affected with the same disease as that with which the arteries are most commonly attacked, and that thus there is established between the diseases of the heart and arteries an analogy, which might be anticipated from the anatomy of their structure, their original formation, and subsequent developement."—*Lond Med. and Phys. Journ. December,* 1827, *from the Repertoire d'anatomie, Tom. III. No.* 2, *for* 1827.

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14. *Calculus in the Uterus.*—M. Duchateau has reported to the Society of Medical Sciences of the Department of the Moselle, a case in which a calculus was found in the uterus: it was discharged spontaneously, after very violent pains. —*Ann. de la Méd. Phys. November,* 1827.

15. *Osseous Union of Fracture of the Neck of the Thigh Bone, within the Capsular Ligaments.*—This is so rare an occurrence, that its possibility has been doubted by some of the most distinguished anatomists. Mr. Amesbury, however, has exhibited to the Medical Society, Bell court, London, a specimen of fractured thigh-bone, within the capsular ligament, which had united by bone; and Mr. Langstaff another, in which the union was partly bony and partly cartilaginous. Mr. Langstaff has described these specimens in the *Medico-chirurgical Transactions, Vol. XIII,* and has also related some very interesting cases of fractured neck of the thigh bone, within the capsular ligament, with the dissections and observations.

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16. *Case of Aneurismal Tumour, situated between the Brain and Sella Tursica.* By T. W. Chevalier.—A female, æt. thirty-nine, masculine form and robust constitution, had suffered from a severe burn, at the age of fourteen, and has ever since complained of an unusual sensation, which she describes as "a shaking movement in her inside." Has been more or less subject to head-ache from her infancy—ceased to menstruate seven years since, without experiencing any inconvenience. Always fond of, and indulged much in, reading—habits temperate and laborious—disposition cheerful. In May, 1827, was afflicted with a strange sort of head-ache, and a sensation of burning in her stomach.

"These head-aches were very severe, usually occurred more than once a week, and lasted, if at night, during two or three hours, but, in the day time, usually for half an hour.

"They were always preceded by flushing of the countenance, and an increased sensation of heat, particularly in the region of the stomach without any shivering or perspirations. They invariably commenced at the back of the head, the pain shooting through to the right eye, and generally producing œdema of the palpebræ. They were always relieved by the application of cold to the head, and they would at any time recur, if she attempted to sit by the fire, or even to expose herself to the heat of the sun.

"Her mother informed me that she often seemed to lose her recollection and consciousness, for the space of a minute or two, during these attacks, and that her health had appeared to decline from last spring, at which time they commenced.

"About six weeks since, she remarked that she felt the same kind of 'shaking or beating' in her head, which, until now, she had experienced only in her stomach. From this time her head was never entirely free from pain, and her sight became slightly impaired, so that she could not see to thread her needle; and, about the same period, while walking on one occasion in Oxford-street, she found herself falling forward to the ground, and would have dropped had she not saved herself by taking hold of the railings. She presently recovered, and returned home, the distance of a furlong, without assistance.

"Three weeks before she died, she fell upon her face in the street, and remained insensible for a few minutes; after which she was conducted home, with her usual head-ache."

On the 8th of October, Mr. Chevalier saw her. "She retained the senses of hearing and smelling unimpaired, as well as her appetite; her sense of taste had been deranged for months past, but this proceeded, as she thought, from the heat of her mouth. Her countenance was now strongly marked with despondency, and she exhibited an air of stupid indifference, which would have induced me to believe her intoxicated or insane; but, upon inquiry, I found her intellect perfectly sound, and her habits of life most abstemious.

"Her pulse ninety-six, labouring, but not hard or full; tongue furred; bowels habitually costive; countenance florid, but as if chilled by cold.

"*October* 19*th.*—At half past one o'clock, she got out of bed and awaked her mother, who inquired what she was doing? to which question she replied that she was opening the shutters to admit the light, because the room was so dark; whereas there was a candle burning in the room, and no shutters whatever to the window. Her mother arose in time to prevent her falling to the ground, and replaced her in bed.

"From this time she became comatose, and I was sent for in the forenoon. I found her perfectly devoid of intellect, and almost entirely deprived of sensation and voluntary motion; with a small, rapid, and labouring pulse; the feet cold; the pupil small and fixed; the countenance not in the least distorted; the breathing rather laborious, but not otherwise unnatural. She shrunk from the examination of the pupil, but evinced no other sign of sensation.

"At noon she appeared a little revived from the cupping, and uttered a word or two upon being disturbed: her pulse had, however, increased in frequency, with scarcely any augmentation of its strength; and she died at one o'clock on the following morning, without having manifested any return of consciousness, or exhibited any other symptoms than those of pure coma.

"*Dissection.*—On opening the head, the vessels of the meninges appeared rather turgid, and an extravasation of recent blood was found beneath the left parietal bone, between the arachnoid membrane and the pia mater, but its quantity did not exceed a table-spoonful, and was diffused over a circular space of three inches diameter.

"The substance of the brain was unusually firm and healthy. The ventricles contained no more than about one fluid drachm of clear serum.

"Upon raising the encephalon from the base of the skull, there was discovered a tumour of the size of a large walnut, attached to the pia mater of the base of the brain, and altogether inseparable without violence, from the sella tursica, so that an attempt was made to remove the adjacent bone, together with the brain, but without success, in consequence of the restraint which the presence of the friends imposed. The soft parts being at length separated, the base of the tumour appeared to have filled the sella tursica, which was left clean by its removal, and its chief bulk had been situated so as to separate the corpora albicantia and the optic nerves more than an inch and a quarter from the posterior clinoid processes.

"The tumour itself was nearly spherical, inclosed in a fine transparent membrane, excepting where it was cut away from the bone, and of so firm a texture that I was induced to believe it solid throughout. Upon cutting into it, however, after it had been macerated in alcohol for four or five days, I found it to consist entirely of coagula of blood, deposited in several distinct layers, which, like those of an aneurism, were paler on one side, viz. towards the bone, and softer as they approached the corpora albicantia, where there was a cavity as large as a filbert, containing recent coagulum.

"With the utmoust pains, I have been unable to detect any direct communication between the tumour and the adjacent arterial trunks: three or four comparatively minute branches of the left anastomosing artery of the circle of Willis are, however, so closely connected with its membranous envelope, that one of these may probably have furnished its contents. The preparation not having been injected, it is impossible to determine this point so accurately as might be desired."—*Lond. Med. and Phys. Journ. December,* 1827.

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17. *Case of Jaundice produced by Inflammation of the Membrane of the Duodenum.*—It seems now well established, that irritation or inflammation in the mucous membrane of the duodenum, will sometimes produce jaundice, where no obstruction can be detected in the biliary ducts. The following case, related by M. G. ANDRAL, fils, affords an interesting illustration of this fact.

"A female was confined, and the delivery was followed by profuse hæmorrhage. This was combated by cold applied to the hypogastrium, and by the introduction of *lemon juice into the cervix uteri.* On the fourth day, the lochia became suppressed, and the abdomen became the seat of severe pain. She was admitted into La Charité, her belly immensely distended and tympanitic, and accompanied by fever of the puerperal kind. Leeches and the usual means were employed, but without advantage. Next day she became completely jaundiced—and on the third day of the present illness she died.

"*Dissection.*—Great quantities of gas were confined in the intestines—these last were covered with albuminous effusions—and whitish puriform secretions were collected in the pelvis. The mucous membrane of the stomach was pale; but that of the duodenum was inflamed. On minute examination, no affection or obstruction of the liver or its ducts could be detected. The internal surface of the uterus was inflamed."—*Medico-Chirurg. Review, January,* 1828, *from the Clinique Medicale. Par G. Andral, fils.*

18. *Appearance of the Brain in an Epileptic.*—M. Bosc relates the case of a young man, aged 17, who was received into the Bicêtre, in December, 1826. The patient was of feeble constitution—limbs little developed—flesh flabby and emaciated. His intellectual faculties were almost annihilated, if they ever, indeed, existed. He made use of no words, except *Yes* and *No.* His epileptic fits were not frequent—he always slept on his right side in bed, with his head under the coverlid. He was affected with diarrhœa for three months before he died. This complaint resisted all remedies, and he wasted away gradually, and at length died.

Dissection.—The cranium presented a sugar-loaf form. The meninges were sound. There were several depressions on the surface of the hemispheres corresponding to protuberances of the skull; and, in these depressions, as well as in several other parts of the brain, the cortical substance was soft, and almost diffluent. The anterior lobes of the brain were extremely little developed—the convolutions small and numerous—the anfractuosities shallow. It was found that the general surface of the brain was softened, as far as the cortical substance was concerned; but, below this, the medullary matter was so indurated as to resemble the white of a hard-boiled egg. This extreme degree of induration was particularly observed over the lateral ventricles. The bottom of the same cavities presented considerable softening of the medullary substance. There was some serum in the ventricles. The cerebellum appeared sound, but was remarkably small. The spinal marrow was not examined.—*Bibliotheque Medicale,* 1827.

19. *Case of Remarkable Disease of the Epiploon.* By Dr. Strambio.—"A young woman, 18 years of age, after enjoying herself at a carnival ball, began to complan of pains in the right side of the abdomen, which increased in size, and led to the suspicion that she was pregnant. Various medicines were ineffectually administered, and when M. Strambio was consulted, the patient presented the following phenomena:—face pale—pulse hard and frequent—skin burning hot—vomiting when food was taken into the stomach—abdomen large, but more so in the right than in the left side. On examination, several indolent tumours were felt, which were not painful unless strongly pressed. The left mamma was shrunk, and the right more enlarged than natural, as well as hard. There was supposed to be inflammation of the stomach, and depletion was practised, locally and generally, with fomentations, &c. It was found that a tumour pressed on the rectum, and prevented the introduction of a pipe, or the finger. All the symptoms increased in severity, and hydrothorax supervened, with infiltration of the left lower extremity. Death soon took place.

"On dissection, a large effusion was found in the chest, and also in the pericardium. The omentum, detached from the viscera to which it naturally adheres, was degenerated into an elastic substance, resembling brain rather than fat, occupying the whole of the abdomen, and disposed into masses of various sizes, connected by prolongations of the original omentum or membranous strips. The left kidney, the spleen, the abdominal aorta, the rectum, the ovaries, and the uterus, were involved in this morbid mass. The other organs were unaltered. The disease was considered to be caused by a chronic phlegmasia of the epiploon, excited by a fall, which the young woman had experienced about a year before her death."—*Medico-Chirurg. Review, from the Annali di Medicina.*

20. *Hydrophobia produced by the Influence of the Mind.*—Dr. **Barbantini**, of Lucca, reports in the *Giornale di Fisica, Chimia, &c. tom. X.* the case of a man, who, attempting to separate two dogs who were fighting with great fury, was bitten slightly by one of them, (his own,) in the thigh. The wound healed entirely on the third day. But the dog having wandered from home, his master then fearing he was mad, the next day exhibited all the symptoms of hydrophobia. During four days he could not swallow either solids or liquids. Some paroxysms of madness even occurred, when on the ninth day after the bite, the dog returned home. He was taken into his master's chamber, and fawned on him as usual. From that moment all the symptoms of hydrophobia disappeared.

21. *Hydrophobia.*—Professor **Brendt**, of Grüfswalde, details in Hufeland's Journal, for June, 1827, some experiments on inoculation with hydrophobic virus. "Some time since," he observes, "I inoculated for the first time oxen and sheep with hydrophobic virus, all the animals became mad and died. Last autumn I again tried it on similar animals, but they were not affected. I repeated the experiment during the winter with the same results. Many physicians who have antecedently to me have maintained that the contagion is not communicable at the second propagation, and I should myself be of the same opinion if my first experiments had afforded similar results to my second and third, but that has proved the contrary, all the sheep perished, the ox which I inoculated the first time was sick nine days, and near dying; in the second and third experiments, the animals were sickened, one for three days and a half, the other for five. In this case was the saliva of the oxen only contagious in the latter stages of the disease?"—*Journal des Progrès, Vol. VI.*

MATERIA MEDICA.

22. *New Escharotic.*—"Professor **Hanke**, of Breslaw, has proposed the muriate of zinc as an effectual stimulant and escharotic, which possesses all the conveniences and advantages of the nitrate of silver, and is at the same time of moderate price. As a stimulant he has employed it in a state of dilute solution for almost every form of ulcer in which stimulant applications are found beneficial; as an escharotic he has used it in cancerous ulcers, fungoid excrescences, nævi materni and the like, and likewise for making issues; and he has further substituted it in place of tartar emetic for exciting irritation of the skin. He has constantly found it to produce the particular effect in view; and has never remarked any constitutional derangement or other inconvenience to result from its use. When employed as a stimulant lotion for ulcers, he usually covered them with charpie, soaked in a solution of two or four grains to the ounce. For the formation of an issue he applied several layers of adhesive plaster, with a hole cut through them on the part, then filled the cavity with the salt slightly moistened, covered the whole with a fold of plaster and a proper bandage, and allowed the salt to act for six or eight hours. Irritation of the skin was produced by rubbing in an aqueous or spirituous solution, soon after which an eruption of papulæ or vesicles appeared, with the extensive scarlet efflorescence.

"The muriate of zinc will probably be found a convenient and effectual escharotic; but Professor Hanke has exaggerated the dangers attending the employment of other escharotics, and in particular, has imputed to the nitrate of silver constitutional effects, which it certainly never does produce. If the professor is correct in his account of the eruption caused by rubbing the muriate of zinc into the skin, it will be a very convenient substitute for tartar emetic, as it does not appear to affect the skin so deeply.

"The method recommended for preparing it is the following. Metallic zinc is to be dissolved in hydrochloric acid with the aid of heat, and the acid to be fully saturated towards the close by the addition of a little powdered carbonate of zinc. A solution of chlorine in water is next to be added, for the purpose of throwing down the iron with which the zinc is usually impregnated; and the fluid, after filtration, is to be evaporated by a gentle heat till it forms a firm gelatinous mass. This is to be preserved for use in close vessels, as it is deliquescent."—*Rust's Magazin für die gesammte Heilkunde*, 1826.

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23. *Castor Oil as a cure for Ring-Worm.*—Several cases of ring-worm are said to have been cured by the application of castor oil. A gentleman of the first rank and character, at one of the East India presidencies, had been subject to the ring-worm, which had long resisted many appliances, external and internal. He was finally induced to make trial of a remedy, suggested by a Parsee boy in his service; this consisted in the external application of castor oil, from which immediate relief, and in no long time, a perfect cure was experienced. An officer of high rank, who had suffered still longer, and more grievously under the same complaint, was persuaded to try the same remedy, and found in it a speedy and perfect cure. He had been in unceasing misery for three years. He found sensible relief in a few hours, and was cured in three days. Several other persons have been cured in like manner. It is not mentioned how often, nor for what length of time this application was made, but a little discretion will supply the omission.—*Lond. Med. Rep. and Rev. December*, 1827.

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24. *Secale Cornutum.*—"It is more than probable that the conflicting opinions which have been given by various practitioners respecting the powers of this substance, arise from its having been gathered at an improper time. It appears, from the inquiries of M. Leveillé, that the active principle of the secale cornutum consists in an unctuous, yellow fluid, which is thrown out from a small fungus upon an unripe ovum, and which dries upon it. If heavy rains happen to fall at the time this juice is formed, it is washed away with the fungoid excrescence; and if the ergot be then gathered, it will be found perfectly inactive. If, on the contrary, the weather is remarkably dry, the juice becomes hardened from want of sufficient moisture, and falls off. The secale cornutum then should be collected before the corn is cut, and at a time when the weather may be considered favourable for the preservation of the active matter, upon which depends the efficiency of this valuable addition to our list of remedies."—*London Medical Gazette, No. IV.*

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25. *Iodurct of Sulphur.*—Dr. Biett has for some time past been experimenting, at the Hospital of St. Louis, with the iodurets of sulphur, as external applications in diseases of the skin, and to give it a fair trial has not conjoined any other curative means, except in cases where there is great irritation of the skin, to restore this part to a state in which this article could be used with safety. There is every reason to conclude that the iodurets of sulphur are among the most energetic therapeutic agents for the cure of cutaneous diseases, but they must be employed with caution, they are to be mixed with some fatty substance in the proportion of a twenty-fifth, a twentieth, or a sixteenth, and applied as frictions on the affected part. These iodurets, especially the deuto-ioduret, applied to the sound skin, stimulate it strongly and cause a pricking sensation, and even pain. Mr. Biett has, however, been successful in curing many cases of psoriasis, tinea, &c.—*Journal des Progrès, Vol. VI.*

PRACTICE OF MEDICINE.

26. *On the Use of Iodine in Enlargements of the Glands, &c.*—Dr. **Milligan** has published in the *London Medical Repository and Review*, for February, 1828, some cases of enormous enlargements of the liver and spleen in children, speedily removed by the tincture of iodine given internally, after mercury had been given without success. The general health of the patients improved under its use; and in one case, incontinence of urine of long standing was cured by it. Dr. Carter relates in the same Journal two cases of incontinence of urine, one of an adult, the other a lad, cured by the tincture of iodine.

Dr. Milligan believes that iodine possesses considerable tonic powers, and that it is a more powerful stimulus than mercury. "It acts," says he, "as a stimulus to every sensible and moving fibre of the body. In the chronic inflammation particularly, which affects the glandular organs, it is a powerful remedy in counteracting it, and in removing that state of morbid structure which is often its consequence.

"Like other powerful remedies, it may, no doubt, be abused; this, however, is no argument against its properties. Its administration requires to be conducted with much care, being occasionally intermitted, and not too long persisted in; and immediately relinquished if it occasion nausea or purging, vertigo or head-ache, which are the only bad effects I have observed from its use. When administered to females, its effects should be well watched; as cases are recorded where the mammæ have been entirely absorbed during its long-continued use. But where the removal of a dangerous disease becomes paramount to every other consideration, as in cases of an enlarged thyroid gland pressing on the trachea and threatening suffocation; and other enlargements, particularly of the scrofulous kind, which other remedies have failed to relieve, the symmetry of the female must become a secondary consideration, and leave little doubt of the propriety of having recourse to iodine. Its good effects, in these cases of very young children just related, go to establish the safety and propriety of the remedy, and afford striking proofs of the advantage to be derived from it."

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27. *Nitrate of Silver and Opium in Yellow Fever.*—Mr. **Lyons**, having observed the magic-like effect of the nitrate of silver in allaying inflammation of the conjunctiva, was led to propose its use, in conjunction with opium, in yellow fever, to allay the irritation of the mucous membrane of the stomach. He has employed it in two cases; in the first it was given long after the appearance of black vomit, and it had, he says, the effect of stopping the vomiting for eight or ten hours before death. In the second case, thirty-two ounces of blood were drawn from the arm—and pills of nitrate of silver and opium given. The patient recovered.—*Lond. Med. and Phys. Journ. February*, 1828.

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28. *Gonorrhœa cured by Antiphlogistics.*—M. **Felix Hutin** relates in the *Annales de la Médicine Physiologique*, three cases of gonorrhœa cured by the antiphlogistic treatment. We subjoin one of the cases:—A young sub-lieutenant was attacked with gonorrhœa. M. H. ordered V. S. ℥xij. and twelve leeches to be placed along the canal of the urethra—emollient applications afterwards to the part, and the patient to live on a milk diet. In five days the patient was cured.

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29. *Hydro-Chloruret of Lime in Fever and Dysentery.*—Dr. **Robert Reid**, of Dublin, has published some clinical observations on the efficacy of the hydrochloruret of lime, as a remedy in certain stages of fever and dysentery. We subjoin one of his cases. A very old man of broken constitution was attacked with dysentery succeeding fever. He had frequent bloody evacuations, attended with great pain in the abdomen—loaded tongue—urgent thirst—great

debility—some appetite. Dr. R. ordered the following mixture:—Hydrochloruret of lime, gr. x. tinct. colomb. ʒij. aq. puræ, ℥iv. M. half an ounce to be taken every hour. Next day the tongue became moist, though still loaded. Medicine continued. On the third day the evacuations were changing to a more natural appearance, and the patient had longer intervals from purging and pain. The medicine was continued for a few days, and the patient entirely recovered. Dr. R. also administered the hydro-chloruret as an enema in some cases; ten grains being added to the common enema. Dr. R. thinks that it will prove a valuable remedy in yellow fever, from the observations which he has made of its efficacy in cases which exhibited all the symptoms of that disease.

30. *Obstruction of the Bowels, of Twelve Day's Standing, Cured by Removing part of their Contents by a Syringe.* By James Alexander, M. D.—Dr. Alexander reports a case of constipation of twelve day's duration, which resisted the usual remedies, and which he relieved by the following means. "I attached," says he, "a long, hollow, urethra bougie to the pipe of an injection syringe, calculated to contain more than a pint; this I filled with warm water, and having introduced the entire length of the tube by the anus, I threw the contents of the syringe into the bowel with some force. I then attempted to draw back the piston of the syringe, held steadily in the same position, and with some exertion raised it about one-third of its length, for the purpose of withdrawing any fluid within its reach. I had continued this action for about half a minute, when my patient exclaimed that he could not breathe longer, and that something was descending. At this moment I felt a sudden rush of fluid into the body of the syringe, which was very soon filled; and upon withdrawing the tube, he had immediately a large, feculent, fluid evacuation, attended with instant and complete relief of all his symptoms. He very soon fell asleep, after taking some jelly and wine, which rested comfortably on the stomach, he awakened refreshed, easy, and with an appearance of relief and composure quite new to him for several days. In twelve hours after, he had, (as I anticipated,) a most violent purging, which seemed to threaten his life, but, by stimulants and nourishment, he rallied again; and, in due time after, his digestive organs resumed their functions, his strength recruited, and I am happy to say he is now restored to perfect health.

"I would recommend, in similar cases, an early recourse being had to the tube and syringe, which can be constructed with great ease and expedition as above; but I think the tube might be longer,—say two feet, and of a softer material than the bougie generally is, so as to follow the winding of the intestine. There is nothing unpleasant in its use, more than the common injection pipe causes, as I have heard from Mr. G——, who, after the end passed some piles, felt nothing; and it was only when I had produced the vacuum in the body of the syringe, and suction in the bowel, that he felt its action. His breathing was then extremely affected, and there was a general bearing down, which continued till he had an evacuation."—*Lond. Med. and Phys. Journ. December*, 1827.

31. *Chloride of Lime as a Cure for Itch.*—M. Derheims recommends the following lotion for the cure of itch:—Dry chloride of lime, ℥iij.—distilled water, ℔j. The solution to be applied to the extremities three times a day. A cure is, he says, generally effected in six or ten days. The liquid chlorides of soda and potass, are nearly equally useful.—*Journ. Chim. Med. de Pharm. et Tox. Dec.* 1827.

32. *Bite of the Viper.*—"M. Jacopo Sacchi, of Barzio in Valsasina, having had occasion to take charge of some cases in which injury had been inflicted by the bite of a viper, (Coluber Berus,) transferred his observations upon them into the hands of Professor Paletta. From these it appears that ammonia, recommended by Dr. Mangili in 1813, although an excellent remedy in many cases, is by no

means sufficient in all, but must occasionally be seconded by every possible means. Although sometimes nature alone has power sufficient to overcome the bite of a viper, yet at other times the injury is so great and sudden, as to resemble the effects of hydrocyanic acid. In these cases he recommends that the patient should be put into a hot bed covered with woollen cloths, and the most powerful sudorifics, with some tonics, administered internally. Friction should be applied all over the body, and at the same time the wounds are to be enlarged, cupping-glases applied, and tow dipped in ammonia applied to the spot."—*Journal of Science.*

33. *On the use of Sulphate of Copper in Chronic Diarrhœa.* By JOHN ELLIOTSON, M. D. Physician to St. Thomas's Hospital.—Dr. Elliotson says that he is satisfied that the sulphate of copper is superior to every other astringent in chronic diarrhœa, and that it will cure the disease more quickly than any other, and often when all others fail. Three grains three times a day is the largest quantity he has prescribed; but this he says he has frequently given. The dose usually borne and required, varies from a grain and a half to three grains. It may be taken for an indefinite time, without any fear of constitutional ill effects. It has a tendency to produce vomiting and griping, it should, therefore, be given in form of pill, after food is taken, and combined with opium.

"In thus recommending," says Dr. E. "a medicine for a purpose which, as far as I know, has not been mentioned by any author, I am anxious, as upon every such occasion, however great its excellence, not to excite too high an expectation—not to appear pretending that it is universally applicable and that it never fails. In cases only in which astringents are proper is it proper; and although ulceration of the inner coat of the intestines, and very extensive ulceration, will heal, and the sulphate of copper will contribute to the cure more than any other medicine, the mischief may be irremediable by any measures; and, on the other hand, chronic diarrhœa is frequently kept up by the state of mind, by the mode of living, or by the residence. No medicine can alter these, and I knew two examples of the failure of it and all other remedies, when a removal from town cured the disease in a few days, and a return to the metropolis was invariably followed by a return of the diarrhœa."—*Medico-Chirurgical Transactions, Vol. XIII.*

34. *Acupuncture in Rheumatism.*—Dr. ELLIOTSON says that he has had an ample experience of the utility of acupuncture. During the last three years he has employed it very extensively, both in private and at St. Thomas's Hospital, in rheumatism, and his experience perfectly coincides with that of Mr. Churchill—of its being chiefly useful in rheumatism of fleshy parts; and the more so as the disease is less inflammatory. "Indeed," says Dr. E. "when the parts are hot, or the pain is increased by heat, the remedy is generally useless, and cannot supply the place of antiphlogistic measures. On the same principle I have never seen it beneficial in any inflammation or inflammatory pain. Like Mr. Churchill, I find that one needle allowed to remain an hour or two in a part, is more efficient than several used but for a few minutes. The effects are often magical. The pain sometimes ceases while the needle is in the flesh, but generally three or four applications to each painful part are required. I have known the disease not entirely yield before the ninth. Of forty-two cases taken in succession from the hospital books, thirty were cured; and the other twelve were clearly not adapted for it, as they were either accompanied or aggravated by heat, and yielded afterwards to antiphlogistic measures. It is occasionally a good mode of letting off the fluid of anasarca: but for this purpose the needle requires to be passed merely through the skin, and not to an inch or an inch and a half, as in rheumatism. Neither is its use always attended with success, as in rheumatism. When practised below the knees, I have heard of it producing mortification; but above them, and in the arms and trunk, it appears free from danger."—*Ibid.*

OPHTHALMOLOGY.

35. *Fistula Lachrymalis.*—Mr. Rainy, senior pupil of the Aberdeen New Dispensary, reports a mode of treating this disease somewhat peculiar. When matter has formed in the lachrymal sac, and a thin probe cannot be introduced through the duct, by the nose, the enlarged sac is laid freely open, and a tent of waxed sponge introduced and kept in the wound till its edges have become callous. By this time the sac has contracted, the external wound shows no disposition to heal when the tent is removed. The appearance of the artificial opening thus formed, Mr. R. says, is not at all disgusting; and persons, who were liable to frequent suppurations of the part, have remained free from them after this treatment, a little matter only passing through the artificial opening, after being exposed to cold, or any other cause which increases the flow of tears, or the secretion from the meibomian glands. Of course, in these cases the duct has not been permanently obstructed. The following case seems to have suggested the above treatment.

"Mrs. ——, aged twenty-eight, had a fistula lachrymalis on the left side, for which the os unguis was perforated, to allow the tears to pass by that way to the nose. This was six years since.

"Two years ago, the sac of the right side became inflamed, and suppurated, breaking externally. The opening soon healed, but the same process again took place three months after, the disposition to inflammation becoming so great that it now came on after the slightest exposure to cold, and sometimes an interval of only a fortnight occurring between them. She therefore became anxious for the operation: the physician in consultation, however, advised it to be deferred till after delivery, the patient being in the seventh month of pregnancy; and that, in the mean time, the sac should be laid freely open, and a tent kept in the wound. This was done, and the tent worn for two months; when it was found that the sac had contracted to its natural dimension, and the opening at its edges thickened. The tent, being troublesome, was dropped, and a little clear fluid was occasionally pressed from the cavity, which occasioned no inconvenience; the whole having less appearance of any thing unusual than the other side, where the scar of the last opening was easily observed.

"Nothing unusual has occurred since; the external opening being little observable, and so small as only to admit an Anel's probe." Several cases have been treated upon this plan with success.—*Lond. Med. and Phys. Journ. Dec.* 1827.

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36. *Amaurosis.*—The *Journal des Progrès, Vol. VI.* gives two interesting cases of amaurosis proceeding from organic lesions.—A carpenter, aged forty years, having exposed himself to cold, whilst in a state of perspiration, was attacked with amaurosis, which resisted every treatment. He was, after some years, seized with vertigoes, accompanied by a throbbing pain in the frontal region; he was bled and purged, but without effect, and died on the eighteenth day from his attack. Autopsia, twenty-four hours after death.—Eyes flaccid; the iris sunk, with its opening thickened as if injected; sclerotica and cornea natural; ciliary circle a little thickened and reddish; the choroid, in general, of a very pale brown, but through its substance a great number of dark black spots were visible. This membrane adhered to the retina and could not be separated from it without the latter being torn: on closely examining the black spots, they were found to consist of small particles of the pigmentum nigrum, much hardened. Jacob's membrane was a little thickened and adhered to the choroid. The medullary lamina of the retina was also thickened and detached at all the black spots above mentioned, whilst its fibro-vascular coat, also a little thicker than common, was firmly attached. In the left eye, near the ciliary circle, was an opening about the size of a pea: the internal face of the sclerotica was reddened at the point correspondent to this opening—this appears to have been an inflammation of the retina, and of that membrane alone.

Another patient, who had also been affected with amaurosis for a long time, presented the following appearances on dissection. The two optic nerves were flaccid and greatly deficient in medullary substance, the crystalline, which was yellow and opaque, was to be seen through the pupil. Although the sclerotica was opened with great care, there was a discharge of yellowish-brown fluid which tinged water yellow, and coagulated in alcohol like albumen. The choroid, which was firmly attached to the sclerotica, was wanting in pigmentum nigrum, the retina was wrinkled, but whole and well formed, but on its external surface, between it and Jacob's membrane, were three pyriform translucent vesicles from the size of a pea to that of a small bean, they contained a fluid precisely similar to that which had flowed out, on the incision, into the sclerotica. The other eye presented similar appearances and vesicles; these latter were without doubt produced from Jacob's membrane.

SURGERY.

37. *Case of Ligature of the Carotid for supposed Aneurism, proving fatal by laceration of the artery under the ligature.*—"The case we are now to describe occurred in the hospital practice of M. Lisfranc. A young girl had a tumour of the size of a pigeon's egg behind the right angle of the lower jaw; and as it presented to M. Lisfranc all the characters of an aneurism, he resolved to tie the common carotid. This was accordingly done, without any untoward accident happening; the ligature consisted of a single thread; and the wound was dressed so as to heal by the first intention. A few hours after the operation symptoms of inflammation of the brain arose, attended likewise with inflammatory symptoms referred to the throat and chest; but these were all subdued by the antiphlogistic treatment, and the girl on the eighth day appeared to be doing well, the tumour having diminished considerably, when, on bending the head to drink, she felt a sense of something giving way in the wound, and a profuse hæmorrhage ensued which proved speedily fatal. On dissection it was found that the tumour was not an aneurism, but a fungus hæmatodes, of which a considerable portion occupied the middle cerebral fossa of the right side, the petrous portion of the temporal bone being mostly destroyed or converted into fungoid matter. The internal jugular vein was filled for six inches of its course with a polypus, adhering by two or three pedicles. In the carotid artery between the ligature and the heart, there was a lacerated hole, three lines long, partly closed by a fibrinous clot. The ventricles of the heart were much enlarged, and their parietes thinner than natural. There was in the posterior mediastinum an abscess containing a wine-glassful of pus."—*Nouvelle Bibliotheque Médicale, March*, 1827.

38. *Urinary Concretion of unusual Dimensions.*—"We have been favoured by Dr. John King, of Irvine, with the inspection of a urinary calculus of a very extraordinary size. Its weight after being thoroughly exsiccated, was 13,000 grains, or 27 ounces 40 grains. Its length was 5.56 inches in one direction, its diameter was 3.37 inches, and in another direction 3 inches. Its longer circumference was 15 inches, in another direction 14.12 inches, and its transverse circumference 10.37 inches. It was externally of a grayish white colour, and its surface slightly tuberculated.

"The patient from whom this stone was taken after death was from his infancy afflicted with severe pain in voiding his urine. The pain did not remarkably increase until about the fourteenth year of his age, when the symptoms becoming more severe, he had recourse to the usual palliatives, but found no permanent relief.

"He continued his usual occupation, (which was that of a carter,) for the space of twenty-six years afterwards, never exempt from the most acute pain.

In the earlier part of this period he was repeatedly advised by several medical gentlemen and Dr. King to undergo an operation, but to which neither he nor his relations would consent.

"During the last six years of his life he was unable to follow his ordinary occupation, and was confined to bed, and when, about four months before his death, Dr. King was again called in, he told him he was willing to submit to any thing that would tend to give him ease. But from the enlargement of the stone, which could be felt externally, Dr. King deemed an operation impracticable. On his death, Dr. King requested leave of his relatives to inspect the body, which was readily granted, (as it had been his dying request.) He found the inguinal glands diseased, and, on laying open the bladder, the stone above described. He died in the forty-sixth year of his age."—*Edinburgh Med. and Surg. Journ. January*, 1828.

39. *Case in which Tracheotomy was successfully performed.* By **William Craigie**, Surgeon.—"T. C. æt. fifty-six, sanguineous temperament, was subject for many years to habitual cough and copious expectoration. On the evening of the 24th April, 1825, passing near his house, I was requested to go and see him, as he was supposed to be dying. I found him sitting in bed with his arms extended, and grasping a post in each hand. Countenance inflated and purplish; eyelids dilated; breathing extremely difficulty, with a sort of soft rattle as if in the trachea; voice almost suppressed, so that he was only able to exclaim in a whisper, "*Gie me breath.*" A considerable hard painful swelling, without sensible fluctuation, occupied the left side of the neck, particularly under the angle and ramus of the lower jaw, preventing the jaw from being depressed, or the mouth opened to admit of an inspection of the throat; a similar but less considerable swelling also occupied the right side. He had been attacked three days before with pain in the throat and difficulty of deglutition, which, on the previous evening, began to produce difficulty of breathing, and on the morning of this day became very considerable, with suppression of the cough and expectoration. For several hours he had been expected every minute to die from suffocation. As swelling of the tonsils from acute inflammation was probably the cause of the breathing being impeded, *tracheotomy* was evidently indicated as the only means of saving his life.

"The urgency of the case precluded the possibility of obtaining professional assistance or proper instruments, yet I determined to make an attempt to save if possible so valuable a life as that of a father of a young and dependent family. I accordingly prepared two quills, which became a substitute for a canula, and with my penknife proceeded to operate. The man being placed and supported on a chair, with his body inclining forwards, I made an incision about an inch in length from the lower part of the thyroid cartilage downwards, in the mesial line, and then introduced the point of the knife under the cricoid cartilage, with an intention of dividing it and the crico-thyroid membrane; but finding the cartilage resist the knife, probably from ossification, I turned the knife and divided the two upper rings of the trachea. One of the quills was instantly introduced, and the man on making a partial inspiration, and stimulated to cough, partly perhaps from the quantity of mucus in the trachea, but more I believe from the irritation of the tube, forced out a considerable quantity of mucus. The other tube being introduced he made a full inspiration, with an attempt also to cough, which filled both the tubes with mucus, but from its tenacity forced none out, it being retracted by the succeeding inspiration. During several following expirations only a small quantity of the mucus, now very slightly tinged with blood from the wound, could be got out by getting it entangled on a handkerchief, as it appeared at the end of the tubes. Fearing that the man might still be suffocated from the quantity of mucus, it occurred to me that if one of the tubes was stopped, the air and mucus would be more forcibly ejected through the other. I accordingly, during an expiration, closed with the point of my finger one of the tubes, and found the mucus thrown out in greater quantity, and with considerable force.

"About an hour after the operation, when the breathing had become regular, free, and easy, and the patient had repeatedly expressed by signs his satisfaction and relief, the person who held the light fainted, and in his fall extinguished it. In the consequent confusion both tubes slipped from the wound, and before the light could be rekindled, and the tubes replaced, my patient was again nearly suffocated, the divided rings of the trachea having come together and nearly closed the opening.

"About twelve hours after this operation the tubes again came out; but now I was rather surprised to find that the wound did not close as on the former occasion, the divided parts of the cartilaginous rings remaining separated near a quarter of an inch. I did not therefore consider it necessary to replace the tubes: and when the patient wished to expectorate, I enabled him to do so, by laying my finger across the upper part of the wound, diminishing the size of the opening, and enabling him to throw out the mucus. Soon after this I left the patient, directing one of the attendants to lay his finger across the upper part of the wound when expectoration was necessary.

"At my next visit in the evening, (of the 25th,) the breathing continued free, and he complained of hunger and thirst, but could not swallow any thing. No apparent alteration on the swelling. On the 26th about noon, and nearly forty hours after the operation, a quantity of purulent matter escaped by the mouth and nose, and the patient was aware of swallowing a considerable quantity, and he was soon afterwards able to swallow some gruel with considerable pain, but with great relish. I saw him about 2 P. M. and on closing the wound with my finger, he could breathe in the natural way, and was overjoyed to hear again the sound of his own voice. It being unnecessary to keep the wound longer open, simple dressings were applied to it, and in eight or ten days it was completely healed. This man has since been as well as formerly. He says that he is better, his cough and expectoration being somewhat alleviated."—*Ibid.*

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40. *Case in which the Canal of the Larynx, after being nearly obliterated, was re-established.* By Robert Liston, Esq. Surgeon.—"E. O. æt. 27, in attempting suicide in September, 1826, had wounded the larynx through the crico-thyroid ligament.

"She was under treatment for some months, and was at length abandoned with the loss of voice, and breathing entirely through a silver tube introduced in the situation of the original wound. On withdrawing this tube, and examining the parts attentively, a very minute orifice, capable of admitting the point of a probe of half the usual size, was discerned leading towards the glottis.

"About April 15, 1827, Mr. Liston saw her by the request of Mr. Sidey, who had attended much to the case from the first, and began to introduce bougies, about the size of darning needles, into the part of the trachea above the wound; and by gradually increasing the size of the bougies, the passage was brought about the end of June to its natural diameter. About the middle of August, the lower part of the trachea was dilated by a tube gradually increased in size, so that one of sufficient diameter might be passed by the mouth.

"Three weeks afterwards the short tube was removed, and a long one was introduced by the wound up into the mouth, there laid hold of and pushed down into the trachea. This was followed by a very severe fit of coughing, which lasted about half an hour.

"This tube, which was about nine inches long, and equal in diameter to that of the largest œsophagus tubes, was retained in the windpipe for fifteen days, during which it caused great salivation, which loosened the teeth and extremely reduced the strength of the patient. In consequence of this it was necessary to use some active means for the closure of the wound. On the fifth day the cicatrix was dissected out by two elliptical incisions, and the edges of the wound united by suture. The tube being removed on the fifteenth day, (October 5th,) she breathed well. In the morning, however, her breathing became very difficult, and *tracheotomy* was performed, and a silver tube introduced, which was kept in five days, and then replaced by a smaller one.

"The actual cautery was applied to the edges of a small sinus, which remained on October 17th; and on the 26th it was reapplied to the opening, which had very nearly closed. On the 28th the tube was removed; and a few days after the wound was completely closed. The woman now breathes with comparative ease through the larynx, and is slowly recovering the use of her voice."—*Ibid.*

41. *Excision of the Head of the Humerus.*—M. Reynaud, Naval Surgeon at Toulon, has performed this operation upon a man who had received two balls in his shoulder, which carried away the internal border of the acromion, and crushed the head and a portion of the body of the humerus. After the operation the extremity of the humerus was about five lines distant from the glenoid cavity, but by degrees the contractions of the muscles drew it towards the coracoid apophysis, where it contracted adhesions; a new articulation was formed in eight or nine months, and at present the patient can execute the usual movements with his arm.—*Archives Gén de Méd. Nov.* 1827.

42. *Case in which the Subclavian Artery was Successfully Tied for Axillary Aneurism.* By Bransby Cooper, Esq.—"William Weston, æt. thirty-eight, a stout and very muscular man, was admitted, November 28, at Guy's Hospital, under the care of Mr. Bransby Cooper. About three months ago, he felt a slight pain and numbness just below the middle of the right clavicle, which extended down the arm to the fingers: this occurred once or twice a week, increasing in severity each time. At the end of a month, the paroxysms had become so violent that, during their continuance, he was obliged to desist from his ordinary occupation—that of a wood hawker. In nine weeks from the first attack, his attention was directed to a slight fulness upon the upper and fore part of the chest. Sixteen years ago he worked very hard, excavating a dock; he drank freely at that time, but has lived very temperately for the last few years.

"Upon examination, a large pulsating tumour was perceived in the axilla of the right side, extending to the fore part of the chest, and producing a fullness, about the size of an egg, between the subclavius muscle and clavicular portion of the pectoralis major: the tumour could be traced so far back as the edge of the latissimus dorsi; the base could not be distinctly felt; handling the swelling increased the pain; a very slight pressure on the subclavian artery completely stopped the pulsation in the tumour. The arteries of the arm were uninfluenced by the aneurism, the pulsations at both wrists corresponding, which, however, were unusually feeble. The numbness and pain had become so great as entirely to deprive him of rest. He was ordered a little aperient medicine a day or two prior to the performance of the operation, which took place on Tuesday, December 4th.

"The patient was placed upon a long table, in the horizontal posture,* with the shoulders slightly elevated, the head directed to the left side, the right arm forcibly drawn down, and the shoulder depressed. The integuments covering the clavicle were stretched upon the chest, and the operation commenced by making an incision about three inches long, which laid bare the edges of the sterno-cleido-mastoideus and trapezius muscles; when the skin, from its natural elasticity, retracted, so as to leave a free opening above the clavicle, exposing the superficial cervical fascia, the platysma myoides being perfectly divided. The centre of this incision was met by a vertical cut, in the direction of the posterior edge of the sterno-cleido-mastoideus. The ex-

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* Mr. Cooper here remarked upon the necessity of the horizontal posture, for the entire deprivation of all muscular action, every fixed point being thus taken away.

ternal jugular vein was distinctly seen on the inner side. The anterior edge of the scalenus anticus muscle was next laid bare by clearing away, (with the sharpened handle of the knife,) the condensed cellular texture, during which process the omo-hyoideus was exposed, and the artery seen immediately emerging from between the scaleni: it was easily cleared from the surrounding parts, so as to admit of the passage of the aneurismal needle. This instrument deviated from the one generally used, by forming a larger portion of the segment of a smaller circle, so as to occupy much less room. A single silk ligature was passed under the artery, and tied in the ordinary way: the vessel could then be seen pulsating between the heart and the ligature, although previously the pulsations could scarcely either be seen or felt. One end of the ligature being cut off close to the artery, the other was left at the external wound. The integuments were brought together by a single suture and adhesive plaster, and the right arm and hand were enveloped in flannel. The patient was then replaced in bed, having scarcely lost an ounce of blood: indeed, only one small artery was divided, and which ceased bleeding without being tied. The pulsation in the tumour entirely ceased upon the application of the ligature, and the sac soon became completely empty. The patient expressed great relief, and did well."—*Lond. Med. and Phys. Journ. Feb.* 1828.

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43. *New Mode of Dressing Fractured Limbs.*—Baron **Larrey** employs for the treatment of fractures these dressings. He encircles the whole of the member with compresses and bandages, soaked in gummy or albuminous substances, which, on drying, form a complete, immoveable, and inflexible case for the injured limb. This he applies whether the fracture be simple or compound, and never takes it off till the cure is completed, whatever may be the degree of swelling, infiltration, or even suppuration, that supervenes. The swelling is either prevented, or subsides, without danger—the infiltrations or suppurations are absorbed—and the process of reunion goes on safely. We think it not improbable that, in simple fractures this plan may have some advantages over the splints and bandages now in use. Baron Larrey's apparatus forms a complete shell or mould, that adapts itself to every part of the limb's surface, and thus forms a more permanent case for the member, than any apparatus which can be constructed of splints. How far the objections, which naturally suggest themselves against this mode of treatment, are valid, experience must show.—*Journal des Progrès, Vol. IV.*

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44. *Ligature of the Subclavian Artery, for Axillary Aneurism.* By **Robert Thorpe**, Esq. one of the Surgeons of the Manchester Infirmary.—"Thomas Wharnby, æt. thirty-six years, was admitted, April 16th, 1827, into the Manchester Infirmary, in consequence of a tumour in the axilla, which, upon examination, proved to be aneurism. About twelve months previously, he perceived a small pulsating swelling in the right axilla, the progress of which was at first very slow; it is now as large as a moderate-sized orange. With the exception of this aneurism, he is, in other respects apparently healthy. The motions of the right upper extremity are not at all impeded; the only inconveniences, are a slight pain at the insertion of the deltoid muscle, and the fingers have been a little œdematous, accompanied with a tingling sensation. If pressure be made upon the subclavian artery, either above or below the clavicle, the tumour in the axilla can be nearly emptied of its contents, and its pulsations totally arrested.

"Early in the month of May, I had a consultation with my colleagues, and an operation was determined upon; but the man was unwilling to have it performed, as the tumour gave him but little annoyance; and though I explained to him its real nature, the uncertainty of other plans of cure, and the bad consequences of delay in the operation, yet he wavered till the month of June, when he consented to the operation.

"*June 21st.*—The patient was placed upon a firm table, with his head and shoulders raised into a half sitting position. The right arm was then drawn well downwards, the face was turned towards the left side of the body, which raised the sterno-cleido-mastoideus muscle. An incision was now commenced, from the outer edge of the clavicular origin of the sterno-mastoideus muscle, and continued outwards for three inches. On dividing the platisma myoides, a small vessel sprung, and was secured, to prevent any obscurity in the further steps of the operation; and here the external jugular vein was brought into view. This was carefully held to the inner side of the wound by my assistant. Having proceeded thus far in the operation, I attempted to separate the cellular membrane, (which is here very loose,) with the handle of the scalpel; but, from the depth of the wound, I did not succeed to my satisfaction; nor do I suppose that the silver knife recommended by Mr. Wardrop would have answered equal to the forefingers, as one can, with them, feel the artery pulsating beneath. Having separated the cellular texture completely, the first dorsal nerve was exposed, and then from its immediate vicinity the subclavian artery itself was readily got at. The common aneurismal needle was passed underneath the artery, which was secured by a single ligature. The aneurismal sac immediately shrunk, and all pulsation was arrested. The whole operation occupied fifteen minutes. Not more than two ounces of blood were lost. The wound was dressed superficially with adhesive plaster, the aneurismal limb invested in fleecy hosiery, and the patient put to bed.

"*June* 22*d. Four o'clock, P. M.*—Complains of oppression in his chest, accompanied with pain; also a fulness in his head, and there is a suffusion of the conjunctivæ. Twenty-four ounces of blood were abstracted, which relieved him immediately. *Eight, P. M.* Both limbs are of the same temperature, 99°.

"23*d.*—The blood drawn yesterday has a buffed appearance; but the patient does not complain of any pain. The thumb, he says, is most benumbed of the fingers. From this period to the 2d of July, nothing particular intervened; but on this night, at one o'clock, he *awoke suddenly*, and felt a gush of blood running down his breast. He lost about ℥xxx. which caused him to faint, and then the hæmorrhage ceased. On the 4th of July, the wound was again dressed, when the ligature came away with the dressings. It is difficult to conjecture the source of the hæmorrhage on the 2d. Did the man detach the ligature by raising himself up suddenly? Yet I do not believe the blood came from the subclavian artery; *it did not come per saltum*, though it coagulated firmly. Did it come from the humeral extremity of the artery? A similar accident occurred in a case under the care of Mr. Green.

"*July* 8*th.*—No recurrence of hæmorrhage. The wound is granulating; the discharge is healthy, and diminishing in quantity. From this time till he left the Infirmary, which was on the 3d of September, nothing occurred worthy of remark. He was once bled to ℥xij. for a pain in the side; and occasionally small doses of sulphate of magnesia were given to him to obviate costiveness. The wound healed very progressively, though slowly.

"To watch the gradual return of the circulation was, in this case, exceedingly interesting. In eight hours after the operation, a tingling sensation, which had lasted from the time that the ligature was tied, now subsided; and a burning heat supervened, or, as the man expressed himself, 'it felt like a fire between his shoulders and along his neck,' accompanied, now and then, with a feeling, as though cold water was trickling down the arm, even to the fingers. Twenty-four hours after the operation, the arms were both of the same temperature, 99°. After a lapse of forty-eight hours, on making the trial, the patient could discriminate which finger was touched; yet it is rather singular that the thumb was most benumbed, though, perhaps, the most vascular. On the 6th July, I discerned a pulse in the brachial artery, but I have not been able to feel any pulsation in the radial, up to the present time, Oct. 25th, 1827. The man is now daily at work, having complete use and power of the aneurismal arm."—*Medico-Chirurgical Review, January*, 1828.

45. *Extirpation of an Incipient Fungoid Tumour.*—W. S. æt. 61, was admitted into Guy's Hospital, under Mr. **Green**, 23d June, 1827, "with a large oval swelling above the pubes; its size is that of a large melon; it is moveable, hardish, ulcerated on its surface, and tuberculated—pressure produces pain down to the testicles, and up to the loins—any strain, as also coughing, gives uneasiness in the part. He remembers it with the earliest period of his life, and was taught to believe it to be congenital. It was no larger than a pigeon's egg, and remained so until a year and a half ago; when, from no known cause, (his health being good,) it increased with some degree of pain. Nothing was done for it until ten months ago, when its growth was very rapid, and its surface began to ulcerate—it constantly bleeds, but to no great extent; a sort of water mixed with blood, as he terms it, issues from it. His health is good, and he complains of nothing; but is willing to have it removed.

"On the 29th he was conveyed into the operating theatre, and Mr. Green, after examining the tumour, determined on leaving a granulating surface, since the integuments were in part ulcerated. He began, therefore, with a circular incision round the base of the tumour, and, in dissecting it out, found it to be perfectly anterior to the muscles, but very deep, from the obesity of the patient. The looseness of the integuments allowed of their being approximated, and the edges were retained together by two sutures—adhesive straps being applied afterwards. Nothing particular presented itself during the operation. The patient was carried to bed, and on the fifth day the wound was dressed, nothing untoward occurring in the interval. The edges of the wound had adhered for some distance on each side; but there appeared some little redness about the sutures, which were consequently withdrawn. Nothing interrupted the gradual formation of firm and healthy granulations, and he left the hospital on the 23d of August, with a very small wound.

"This illustrates, if any single case can, the importance of removing extraordinary growths, even though they shall not have attained a formidable character; for here, though indolent at first, it began suddenly and rapidly to assume malignancy. True fungus hæmatodes is usually met with in persons, where a general disorder of the system is indicated by a peculiar unhealthy aspect—a relaxed fibre—a sallowness of the skin, which is often covered with clammy sweats—a constant troublesome cough, and general debility. But it is clear that the present case was not precisely of that character, although the fungoid and tuberculated appearances indicated a state which could no longer exist with impunity. The robust constitution, the general good health, and especially the absence of symptoms in other parts of the body, by which a similar disease might be feared, go rather to disprove a predisposition to fungoid disease; and, if so, they go likewise to determine the nature of the present state, *viz.* a *local* disease, produced by long and continued *local* irritation. It is this tumour which requires extirpation; or, delay may occasion a degeneration of it into something very formidable. A case of glandular swelling of the neck, which occurred in the hospital, illustrates this; for there, delay was occasioned to the operation by endeavours to remove it by the local application of iodine. The constitution became gradually but irremediably affected, while the tumour, in a few weeks, assumed an enormous size, with all, or nearly all, the characters of the present case; and, had the health permitted even, the operation must now have been deemed out of the question—so rapidly had these changes manifested themselves."—*Ibid.*

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46. *Cure of Nasal Polypi by Saffronised Tincture of Opium.*—"Dr. **Primus**, of Babenhausen, asserts that the saffronised tincture of opium, (of the Prussian Pharmacopœia,) possesses the property of gradually destroying nasal polypi, when applied to them. Certain cures, which have been thus effected, have already been published, and a striking case occurred in January, 1826. A man, forty-six years of age, had one in each nostril. The tincture was applied several times a day to the bases of the polypi, by means of a small-hair brush or

lint roll. In eight days the tumours had assumed a paler appearance, and lost a little in volume; a serous secretion from the nose, which had existed for a long time, was diminished, and the pituitary membrane had acquired a more lively tint, as if in a sub-inflammatory state. The application was continued, the tumours continued to decrease, and at the end of three weeks had entirely disappeared."—*Lond. Med. and Phys. Journ. January,* 1828, *from the Mediz Chirurg. Zeitung.*

47. *Case of Phagedenic Ulceration, treated by* Mr. Earle, *at St. Bartholomew's Hospital.*—"Sarah Mitcham, æt. eighteen, admitted into Patience' ward, under Mr. Earle, October 27th. She gives the following account of herself:—That, about five weeks since, several hard whitish bumps appeared on the pudendum, which were attended with an itching sensation and some heat when she was warm. She had previously much scalding in making water, but she did not observe any discharge till after these tumours appeared, when a very profuse one came on. She for some time neglected these symptoms; but, about a fortnight ago, a small pimple came out on the left side of the labium, which soon broke into a painful sore, it was not however till this had attained the size of a shilling that she applied to a surgeon, who gave her some black wash, which she used with much advantage till poverty obliged her to leave it off; upon which the sore immediately began to spread again. Since she discontinued the wash, she has applied nothing but bread and beer-ground poultice.

"The sore is at present of a most formidable nature: it extends for nearly a hand's breadth on each side of the labia upon either thigh, and goes backwards on the buttock and perineum, having a dark-brown and ragged appearance, with an intolerable fetor; the edges are uneven, and violently inflamed; the labia are completely eroded, but the raphe of the perineum seems uninjured; there is a copious discharge from the vagina. The constitution is apparently but little affected: puse 100, yet not full; bowels in good order, and no fever. The strong nitric acid was freely applied for some time, during which she suffered great agony. The surface was then dressed with dry lint. Ol. Ricini ℥j. Tinct. Opii, gtt. l.—In about an hour she became perfectly easy, and went to sleep.

"28th.—The phagedenic process has apparently stopped, except on the left side, to which the nitric acid was again applied. Tinct. Opii, gtt. xl.—The pain of this operation did not cease till evening, when she took Pulv. Ipecac. c. gr. x.

"29th.—Better. The whole surface is now destroyed, and the edges clean. Sore to be washed with Sodæ Chlor. ʒij. Aquæ Oj. several times in the day. General health continues good.

"30th.—Part of the eschar has come off with the dressing. Quinin. Sulph. gr. ij.; Infus. Menthæ Sulph. ℥j. fiat haust. bis die sumend.—Wound dressed with Lotio Opii, ℥j.; Acid. Nit. gtt. iij.

"31st.—Much the same. Edges smeared with Ung. Cetacei et Cerat. Res. Flav. āā ℥j.—Lotion as before.

"November 1st.—The eschar is entirely removed, and the sore looks clean and well.

"5th.—Granulations are sprouting fast, and the edges are skinning over. The vaginal discharge has much diminished, and great care is taken to keep the parts clean.

"10th.—Rapidly improving; the wound is much contracted. Contr. ut antea.

"15th.—She is getting fast well; the wound is very much diminished.

"She left the hospital cured, soon after."—*Lond. Med. and Phys. Journ. Jan.* 1828.

48. *Amputation of the Neck of the Uterus.*—M. Lisfranc has amputated the neck of the uterus in twenty-two females, two only of whom have died.—*Bulletin des Sciences Medicales, Nov.* 1827.

49. *Case of Injury of the Head, in which a Foreign Body was lodged in the Cavity of the Cranium for twenty-seven days, without producing fatal consequences.*—Dr. Rogers relates in the *Medico-Chirurgical Transactions, Vol. XIII.* a very remarkable case of this kind. A boy, æt. 19, *July* 10*th*, fired off a gun which burst, and injured his face and head in a most dreadful manner. He was able to walk some hundred yards immediately after the accident; but at length, being overpowered by loss of blood, he fell, and was conveyed to a neighbouring house. Shortly after he became convulsed, and was totally deprived of his senses. In this condition Dr. Rogers first saw him, when the assistance of three or four persons was required to keep him sufficiently still to enable Dr. R. to examine a wound of considerable extent on the forehead, just above the centre of the left superciliary ridge. After enlarging the external wound Dr. R. discovered an aperture, about the size of a crown piece, in the frontal bone, through which a considerable quantity of the substance of the brain was oozing, and as much as a table-spoonful adhered to the hair and integuments around. He then introduced his finger within the aperture, in order to ascertain whether any fragments of bone were lodged there; but could not discover any. The wound was lightly dressed—sixteen ounces of blood was taken from the arm, the patient then became more composed, and passed a tolerably quiet night. Both the eyes were closed from tumefaction of the palpebræ, and the face was also much bruised and swollen. The next morning he was more tranquil, and appeared sensible when questions were put to him. An antiphlogistic treatment was adopted; consisting in blood-letting, laxatives, &c. The wound was dressed with soft poultices, and fomentations were applied to the surrounding parts. The wound discharged very copiously.

Nothing particular occurred until the 27*th of July*, when there was some stiffness of the lower jaw. The next day the bowels were relieved by a purgative enema, and the stiffness of the jaw went off. On the 2*d of August* the discharge continued very abundant, and the bodily strength apparently affected by it; but by improvement in diet, and giving pulv. cinchona, ℈j. every six hours, no other unpleasant symptom followed.

August 4*th*.—On examining the cavity Dr. R. felt something that seemed like a piece of iron, and attempted to get hold of it with a pair of forceps, but it slipped from his grasp, and as it gave the boy great pain he desisted, but the next day it was more visible, and raising it from its bed, by means of a trephine elevator, he extracted it. It proved to be the breach-pin of the gun, consisting of solid iron, three inches in length, and weighing three ounces. The extraction did not occasion any hæmorrhage. The patient gradually improved; several portions of bone came from the wound.

September 4*th*.—Free from stupor, weight or lightness of the head—able to walk about a little in the house—sleeps well—bowels regular, without the assistance of medicine—appetite good.

December 10*th*.—Is in good health—says he remembers hearing the report of the gun, also that his little brother walked with him into the yard, but that he was obliged to stop several times from faintness. He also remembers his father coming to him in the yard. Of what took place for the space of a week after his being taken into the house, he does not appear to have any recollection, although he certainly answered questions put to him after the first day of the accident, correctly and consistently. After the first week he readily knew persons by their voices, his eyes being closed by the swelling of the palpebræ.

The sight of the left eye is totally destroyed, but that of the right remains perfect. The smell and hearing are both perfect, and there is no defection of his memory or general faculties, nor any difference in the sensation or power of motion of the two sides of the face.

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50. *On the Treatment of Nævi Materni with Ligature.*—Mr. White has been in the habit, during many years, of destroying the larger nævi by strangulation with the ligature: he passes a curved needle under their base, and a single or double liga-

ture is used, according to the magnitude, figure, and situation of the tumour. In one instance, four ligatures were necessary in order to include the whole of the nævus, on account of its irregular form and diffused surface. An assistant should raise the tumour, with as much of the surrounding skin in which it grows as possible, and thus enable the operator to pass the needle sufficiently deep, and at the same time include with his knot a portion of the healthy skin. "When the nævus is not large, a needle of sufficient length being carried under the centre of its base, and the structure elevated upon it, a single ligature passed behind the needle, and firmly tied with a double noose, will be sufficient to destroy the organization. Where, however, the size of the tumour renders its strangulation by this mode doubtful, the needle should be armed with a double ligature to enable the operator to tie one-half with each. This, in every instance where the whole substance has been included, has uniformly destroyed the structure, leaving, on its separation, a healthy granulating surface. There are some instances, however, and some situations, where it is impossible to include the whole of the tumour with the ligature; but generally, in such cases, the inflammation excited by its application, in the neighbouring parts, is sufficient to obliterate, by condensation of the surrounding cellular structure, any remaining portion of the nævus."

Mr. W. relates in the *Medico-Chirurgical Transactions, Vol. XIII.* two cases successfully treated by this operation, and a third which was partially successful.

The dange in many cases attending the removal of nævi with the knife, and the inefficacy in most instances of the other modes of treating them, have induced Mr. Lawrence to employ the ligature as used by Mr. White, and he relates, in the thirteenth volume of the *Medico-Chirurgical Transactions,* four cases successfully treated. The object in this mode of treatment, it is almost unnecessary to state, is to intercept the circulation completely in the tied part, and thus to deprive it of vitality as speedily as possible. To effect this "the ligatures must be drawn very tightly, and ought, therefore," says Mr. Lawrence, "to be so strong as to bear the utmost force we can employ with the fingers and thumbs without breaking. Stout silk-twist will answer the purpose; but we should observe the precaution of trying its strength previously. As it is necessary, in some instances, to include a large bulk of parts, their complete strangulation is not easily affected, however strong the ligature may be. Perhaps it might be advisable, under such circumstances, to adopt the proceeding recommended by Mr. Mayor* of Lausanne.

"As the continued pressure of the ligatures keeps up irritation in the parts immediately constricted, and in those around, which are forcibly dragged together and puckered, it is desirable to remove them as soon as we can be certain that the objects of their application are accomplished, namely, coagulation of the blood in the vessels composing the tumour, and death of the part. The foregoing cases prove that these purposes are fully effected in forty-eight hours, while the fourth shows that we cannot safely trust to a compression of one-half that duration. The danger of inflammation or irritation is at an end as soon as the ligature is taken away, and the relief to the patient from its removal is very obvious."

51. *Hydrorachitis cured by Puncture.*—"A woman of Padua brought her child, aged two years, to Professor Buggieri, on account of its having lost the use of the lower extremities: on examination, it was discovered to have a *spina bifida* in the lumbar region: the tumour was transparent, fluctuating, and painful on pressure. The mother was directed to protect the swelling from external violence, and nothing else was attempted.—One day, however, having, confided the child to the care of her daughter, she accidentally pricked or ruptured the tumour, by which a quantity of limpid fluid was evacuated, but without any thing remarkable fol-

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* In a work entitled, "Essai sur les Ligatures en Masse, 8vo. Paris, 1826," this gentleman, who is surgeon to the hospital of the Canton de Vaud, recommends a method, by which ligatures placed round thick or firm substances, may be tightened to any degree that may be desired, and firmly fixed in that state. He uses a small instrument like some kinds of tourniquet, fixing the ends of the ligature to a cylinder which turns on its axis, and which is held in any position, to which it may be brought, by a small spring and rack.

lowing. The mother now carried her child to Dr. Bozetti, who found the tumour flaccid; he applied a bandage so as to make slight pressure, and a few days afterwards he found it again filled—but not to the same extent it had formerly been. Encouraged by the result of the accidental puncture, he resolved to make another with a needle, and the fluid which now flowed was less abundant and less limpid than it had been before. Next day a slight degree of inflammation commenced in the tumour, which soon subsided, but not till it had produced adhesion between the integuments and the parts beneath. It required after a short time to be punctured again; but the lymph which now exuded was viscid and plastic. By moderate compression the parts become gradually consolidated, so that within a year this part of the vertebral canal had acquired a semi-cartilaginous firmness, and the inferior extremities regained their power. A plate of lead was applied over the defective part of the spinal column, and kept there by a bandage. Another child was treated in the same way, and with an equally favourable result. These cases, which are related in the *Annali Universali*, are more encouraging than most of those which have occurred in this country, where from the combination of hydrorachitis with hydrocephalus, or from other causes, the results have not in general been fortunate."—*London Medical Gazette, Vol. I. No. I.* 1827.

52. *Amputation of the Thigh at the Hip-joint.*—Mr. Orton relates a case of this, in the thirteenth volume of the *Medico-Chirurgical Transactions.* A man, æt. twenty-five, was affected with extensive disease of the knee, and abscesses in the thigh, followed by caries of the bones. At the end of a year and a half, all hope of recovery being at an end, it was resolved to perform the above operation, which was done on the 10th of June, 1824. On the 6th of August he was able to get about the house a little on crutches. He recovered so far as to be able to work on the stocking frame, and was well in January, 1826. The case was in every respect most unpromising, and its successful issue is highly creditable to the boldness and skill of the operator.

In *Rust's Magazin, Vol. XXI.* 1827, another case is recorded which did not however terminate fortunately. Baron Hovel, æt. twenty-one, received in a duel, a ball in the superior anterior and exterior part of the right thigh: the ball fractured the femur immediately below the great trochanter, and detached a splinter three inches long, which projected at the internal part of the thigh, behind the artery and crural nerve; at this place the ball was also felt. The wound was enlarged to favour the exit of the blood. At the end of three weeks suppuration became very abundant; the patient emaciated; the pulse small and accelerated; and amputation was resolved upon, but not to remove the bone at the articulation unless its head should be diseased. A circular incision was made down to the bone, the head of which was found to be carious, and it was removed at the articulation. Very little blood was lost, and the patient did not appear to suffer much, but the pulse became feeble, the body cold, insensibility supervened, and the patient expired ten hours after the operation, and on the forty-fifth day from the accident.

An unsuccessful case is also recorded by M. Roux in the *Archives Générales,* for Nov. 1827. The operation was performed in consequenc of a fungous tumour in the upper part of the thigh.

MIDWIFERY.

53. *Rupture of the Uterus.*—In the 13th vol. of the *Medico-Chirurgical Transactions,* three cases are recorded of this accident, two by Wm. Birch, Esq. and one by Dr. Smith. In one, the woman lived nearly eight weeks; in the other two, she recovered. In all the cases the head of the fœtus was perforated, and delivery effected with instruments.

Two cases are also related in the *Repert. Med. Chirur. di Torino.* In the first it occurred at the sixth month of pregnancy: the operation of gastrotomy was performed two hours after the accident; the contents of the uterus were removed and the patient recovered. In the second, rupture of the uterus and rectum occurred; the fœtus was expelled by the anus, and the woman completely recovered in fourteen days.

These cases are highly interesting, as controverting the opinion of Dr. Hunter, who considered that any attempt to relieve a woman who had suffered a rupture of the uterus, was cruel; an opinion subsequently, strongly enforced by Dr. Denman.

54. *Cæsarian Operation.*—This has lately been successfully performed at Florence, in a case of deformity of the pelvis. In a fortnight the ligatures were carefully removed from the wound, and bandages were applied round the body. The patient left the hospital perfectly well thirty days after the operation.

55. *Extra-Uterine Gestation.*—G. NORMAN, Esq. of Bath, gives an account, in the 13th vol. of the *Medico-Chirurgical Transactions*, of a case of extra-uterine gestation, in which the fœtus was extracted through an aperture made in the posterior part of the vagina, between the uterus and rectum. The patient died. Mr. N. attributes this unfortunate result to the rupture of the umbilical cord, which prevented his finding the placenta and extracting it, and to the uterus being in a diseased condition.

56. *Detachment of the Placenta by Injection of the Funis.*—Dr. MOJON published in the *Repertorio di Med. etc. Torino*, for May, 1826, a new method for separating the placenta from the uterus. This mode consists in emptying the umbilical vein of its blood and injecting into this vein, with some force, cold water acidulated with vinegar. When the first injection does not produce a separation of the placenta in five or six minutes, the fluid is to be allowed to flow out, and the injection repeated. In the *Annali Universali di Medic. di Milano, for* 1827, Dr. Tartoni relates a case of retention of the placenta, in which he employed this measure, and the separation and expulsion of the after-birth quickly followed. We learn from the *London Medical and Physical Journal, for December,* 1827, that Dr. Hopkins has also had recourse to this plan in two instances, and with an equally favourable result. The patients would not permit the introduction of the hand, and pressure upon the uterus, the application of cold, &c. having been tried to no purpose, about eight ounces of water were thrown up the funis with a common syringe. In two or three minutes uterine contractions took place, of which there had been previously no symptom, although two hours had elapsed after delivery, and the placenta was expelled into the vagina. The editor of the last-mentioned Journal very justly remarks, "although we do not imagine that this mode of treatment can be frequently necessary in cases of retained placenta, the fact is worthy of being recorded, as it is always advantageous to increase our means of affording assistance, however seldom their employment may be required."

Since the above was written, we have received the *Bulletin des Sciences Médicales*, for November, 1827, in which it is stated, that the means, above noticed, of detaching the placenta in cases of uterine hæmorrhage, had been employed at Genoa, Florence, Milan, Turin, and Geneva, and in every instance with success.

57. *Accouchement after the Death of the Mother.*—We noticed a case of this in our last number; another is related in *Rust's Magazin, Vol. XXIII.* 1826.

58. *Fracture of the Femur in the Fœtus in Utero.*—M. SCHUBERT reports in the Zeitsch. für Staatsarz von Henke, 7e. Erg. Heft. p. 311, the case of a female delivered before her term, of twins; one of whom was born with a fracture

of the left thigh which had occurred in utero: the fractured bone which had pierced the flesh, projected more than an inch, and was carious. About six weeks before the accouchement, the mother, during a movement of the fœtus, had heard a noise like that produced by breaking a stick, and from that period she had felt pains similar to those produced by the pricking of a pointed instrument. Dr. Oswald thinks that this accident cannot happen except when there are twins. —*Journal des Progrès, Vol. VII.* 1828.

MEDICAL JURISPRUDENCE.

59. *Case of Suffocation.* By **Alexander Rainy**, senior pupil of the Aberdeen new Dispensary.—"June 8th.—J. B—, six weeks old, was taken fifteen miles into the country by its father and mother, in order to be left at nurse: the night being cold, it was very closely wrapped up, and the mother, taking it under her mantle, stepped into the gig. During the first part of the journey, the infant cried much, which made the parent, from the idea of her being cold, increase the number of wrappings around her. She was put to the breast, but refused to suck. For the last half hour, the child lay quietly in the mother's arms, and, on handing it out of the vehicle, it was found dead.

"The body being exposed, the integuments of the chest and sides of the abdomen were found to be of a dark hue, as were the arms and head. Anterior part of the abdomen of usual colour. A circle round the neck, where there was a deep fold of the integuments, contrasting by its whiteness with darkness of the neck. No lividity, however, in this situation. Head lies forward on the breast. Deep wrinkle between the nose and cheek, from under the eyes to the side of the mouth. Nose wrinkled. Tongue pushed from between the jaws, but not projecting farther than the lips. Mouth open. Thumbs drawn in to the palms of the hand; fingers bent. Knees half bent. Forehead wrinkled. Loins and back part of pelvis discoloured. Cellular substance of the chest vascular. Intestines all over of a vermilion tinge, particularly the small ones, the arteries of which are minutely injected. Vessels of omentum filled with florid blood. Stomach vascular, and filled with a fluid resembling flour paste, but different, (at least to appearance,) from coagulated milk. Spleen bulky, and of a firm consistence. Upper surface of the stomach more vascular than at the smaller curvature, where it looks healthy; villous coat soft and vascular. Pleura sternalis shows a network of beautifully intermingled red vessels: arteries of the pericardium can be distinctly traced to their terminations on its surfaces. Two drachms of clear fluid in the pericardium. Coats of the aorta and pulmonary artery show their minutest vasa vasorum. Veins of the heart gorged with blood. Thymus gland pale. Lungs of left side natural; lungs in right side bright red, crepitous, floating in water. Bronchiæ filled with red froth. Trachea completely occupied with a reddish mucus, its inner membrane vascular. Scalp vascular. Vessels of brain turgid; dura mater natural in colour, while even its finest vessels can be clearly traced. Three drachms of clear fluid between the tentorium and cerebellum; plexus choroides distended with venous blood; a small quantity of serum in the lateral ventricles. The medulla of the brain, on being cut, exhibits a number of red points."—*Lond. Med. and Phys. Journn. Dec.* 1827.

60. *On the Signs of Drowning.*—M. **Orfila** lately read a memoir on this subject to the Royal Academy of Medicine in Paris. The object is to establish certain criteria by which we may ascertain whether the submersion has taken place before or after death; and this he has attempted to do by numerous examinations of the bodies of individuals who have drowned themselves, and by experiments on dogs. The inferences which he draws are almost all of a negative kind, and as they contain an epitome of all that is known on the subject, we subjoin them.

1. That the red, livid, and swelled condition of the face, with froth at the mouth and nostrils, which some authors have laid down as indicating that the submersion has taken place during life, leads to no such inference, as it is wanting in many who have been drowned, and is present in many who have met their death by other means.

2. That the same remarks apply to extreme paleness of the face, which is an effect of the body remaining long in the water. M. Orfila here describes the alterations which the skin undergoes in those who have been long submersed. He asserts that on the legs the integuments become indigo colour, and then brownish on exposure to the air, while the rest of the body is very white; but the moment it comes into contact with the air, it is successively converted into brown and green, commencing at the chest. Remaining long in the water also brings on abrasions of the skin, which may give rise to the idea of wounds having been inflicted.

3. Excoriations of the fingers and traces of dirt under the nails are of no assistance, because they are wanting in those who are drowned before they come to the bottom, while they may be present in a body which, being thrown into a river, strikes against various obstacles.

4. Injections of the brain and its membranes M. Orfila thinks would be a satisfactory indication of drowning, if it were proved that the body became cold in a vertical position. As, however, this sign is frequently absent in those who have been drowned, so it cannot be regarded as a positive proof.

5. In those who have been drowned, the right cavities of the heart, the venæ cavæ, the pulmonary veins and arteries, are generally distended by a quantity of black blood, while the left side of the heart and the aorta are much less filled; the right ventricle is of a blackish brown; the left of a clear rose colour; and the right cavities retain a less contractile power than the left. This condition, however, is met with in many cases of sudden death.

6. Although the blood is generally fluid, yet M. Orfila has seen it coagulated in one individual who was drowned; a fact also observed by Lafosse, and more recently by M. Avissard.

7. The dissection of more than fifty persons who had been drowned has satisfied M. Orfila that it is a mistake to suppose that in drowning the individuals die during inspiration, and that, in consequence, they have the diaphragm pushed into the abdomen, and the chest elevated.

8. He regards the colour of the abdominal viscera as indicative of asphyxia in general, but not from drowning in particular.

9. The experiments of Orfila, and some other physiologists, show that water enters the stomachs of those who drown themselves; while this is not the case with regard to bodies thrown into the water. But, in order to give its full value to this sign, it would require to be proved that the water had neither been swallowed before death, nor injected after it.

10. It is not true that the epiglottis is pushed down upon the larynx.

11. Great importance had been attributed to the presence of sanguineous froth in the windpipe. M. Orfila objects, however, that this exists in other cases, as in death from epilepsy and hanging; while it is wanting in the drowned who have remained long under water, without coming to the surface to breathe.

M. Orfila made a considerable number of experiments to ascertain if water enters into the ramifications of the bronchiæ of the drowned; and he has always found that the fluid entered the lungs of the animal, and that the quantity was greater or less in proportion to the care took to keep the head erect in lifting the animal out of the water. But the fluid is not found in the air-passages, if the examination be made soon after death. As to the question, whether the water enters the lungs after death, the experiments of M. Orfila agree with those of M. Piorry, proving that it does enter, and more completely the more vertical the position of the animal; and consequently, the presence of water is not a sufficient proof of drowning, as water enters the air-passages of the dead body, and that the only absolute sign is the presence of water in the minute ramifications of the bronchiæ; it being proved that this water is the same as that in which the individual was immersed, that it had been injected after death, and could not have penetrated to the lungs from the vertical position of the body in the liquid.

61. *Poisoning by Nitric Acid.*—The sixth vol. of the *Journal des Progrès* contains an interesting case of poisoning by nitric acid, in which the patient recovered, reported by Dr. Levret. "On the 25th September last," says he, "a young man of eighteen years of age, of a strong constitution, after having eaten heartily of bread and cheese, and drank some brandy, swallowed, about eleven in the morning, two ounces of the nitric acid of commerce. He immediately experienced a burning heat in the throat and epigastrium, this pain augmented rapidly, and in about a quarter of an hour vomitings supervened. Being called to him, I took with me a bottle of calcined magnesia, and having mixed two ounces of it with water, I induced him, after great solicitation, to swallow it. The first dose of this antidote was administered twenty-five minutes after he had taken the acid. Deglutition, which was at first difficult, became easier, the mouth was white, but not painful, on the chin was a yellow line, indicating the nature of the acid he had taken, the pulse was a little quickened; half an hour after the administration of the first dose of magnesia vomiting again ensued, at first of yellowish-white matter, then some food, and afterwards of a thick fluid of a brick-red colour.

"The first efforts to vomit were accompanied with excruciating pain and inexpressible anxiety, these soon subsided, and about two o'clock the patient suffered no pain at the epigastrium, even pressure on this part only occasioned slight uneasiness, but the umbilical region became the seat of violent pain, and the patient complained of general rigors. Thirty leeches were applied to the abdomen, followed by emollient cataplasms, and a decoction of mallows given as a drink, and as injections.

"In the evening he again had violent vomiting, but with less pain; he drank much, and was much alleviated by the injections—the epigastrium again painful, V. S. ℥vj. 12 leeches to epigastrium.

"2d day.—General state of patient improved; still pain at epigastrium and umbilicus; vomitings of brick-coloured matters, and even the dejections tinged with them—continue cataplasms and injections—to drink small quantities of mallow tea; in the evening the pulse had risen—throat painful, &c. 12 leeches to throat.

"The patient gradually recovered under this treatment, and in eight days was convalescent, but still recommended to continue on low diet."

CHEMISTRY.

62. *On the Iron contained in the Blood.*—"Mr. Englehart has shown that when an aqueous solution of the colouring matter of the blood is treated with chlorine, it is decomposed; a flocculent substance is deposited, which is insoluble in water, and which, when separated by the filter, yields all the iron of the colouring matter, by treating it with the commonly employed re-agents.

"Mons. H. Rose has repeated and verified the experiments of Englehart. He found, however, that the iron precipitated by ammonia contains a small quantity of phosphate of lime and subphosphate of iron, and also that if excess of ammonia be added without separating the flocculent matter, it is re-dissolved; the liquid becomes of a deep brownish-red colour, and the iron does not precipitate. After a long time it is indeed true that flocculent matter is deposited, but it contains scarcely any iron, almost the whole of it remaining in the ammoniacal solution. It appears, therefore, that the red colouring matter and the flocculent matter derived from its decomposition by chlorine, possess the property of hindering the precipitation of the iron by the alkalies; indeed, a considerable quantity of solution of iron may be added to the colouring matter, without its being precipitated by the alkalies. If the colouring matter be destroyed by chlorine, and the insoluble matter be separated, all the iron may be precipitated by re-agents; but this is not the case if the insoluble matter be left in it. There is, however, a limit to these facts; for when the iron is in too great proportion to the colouring matter, the iron is then partly precipitated.

"M. Rose found that when the serum of human blood, or of the ox or sheep, was mixed with a considerable quantity of solution of iron, it presented the action of the usual re-agents upon the metal. Ammonia and the other alkalies, although added in great excess, produced no precipitate; they even re-dissolved that occasioned by the addition of albumen to a solution of peroxide of iron; and neither hydrosulphuret of ammonia, nor tincture of galls, occasions any precipitation in the solution.

"In general, peroxide of iron and other oxides are not perceptible by alkalies, when an organic substance soluble in water is added to the solutions, provided it be of such a nature as to be entirely decomposable at a high temperature. On the contrary, when an organic substance soluble in water is totally or mostly volatilized without decomposition, it does not prevent the iron from being precipitated by the alkalies. The first effect is produced in a hot solution of gelatine or starch, in gum arabic, linseed, mucilage, sugar, sugar of starch and of diabetes; the pectic, kinic, malic, citric, and tartaric acids; in fact, this last acid has long been known to produce this effect. The contrary property was found in the following acids; viz. the oxalic, acetic, formic, pyro-tartaric, pyro-citric, pyro-mucic, succinic, benzoic, &c. and by alcohol and sulphuric ether."—*Lond. Med. and Phys. Journ. January,* 1828, *from the Annales de Chimie et de Physique.*

63. *On Black Vomit.*—Mr. Lyons says that he soon convinced himself, from an attentive examination of the black vomit when ejected from the stomach, and the state and contents of the stomach after death, and likewise from an examination of the liver and tubuli biliferi, of identity of that fluid, with altered blood; but he was at a loss to account for the mutation of the blood's colour to black. "The black colouring matter of this fluid was separated by filtration in the easiest manner, and its powerful acid qualities were proved by its active effervescence with alkalies, as well as by its action on the enamel of the patients' teeth, and by its powerfully ascescent smell: but it was not until I observed, in the examination of recruits at this station, that an immense quantity of muriatic acid is constantly secreted from the skin, with the insensible perspiration, that I brought to my mind Dr. Prout's discovery of this acid's being the principal one secreted in morbid conditions of the stomach, and with it the idea of ascertaining the effects of this acid upon the blood.

"Having made the experiment of adding muriatic acid to blood, the colour of the blood was instantly altered to a deep black, and when diluted with water, presented a liquid which I should have declared, from mere inspection, to be black vomit. This experiment has been tried by Dr. Hope, at my suggestion, and the results have been the same, even when the muriatic acid had been so far reduced with water as to be hardly capable of turning the edges of the teeth; and is supposed by Dr. Hope to be an interesting adaptation of Dr. Prout's discovery to the explanation of the symptom of black vomit."—*Lond. Med. and Phys. Journ. Feb.* 1828.

64. *Metallic Mercury found in the Body.*—On analysis, made at the Chemical Laboratory of the Faculty, of the mammary glands, the mesentery, the large intestine, and salivary glands, of a young woman who died of a puerperal peritonitis, and who was treated with very copious mercurial frictions, metallic mercury was found in these organs. This result, which is contrary to the assertions of many chemists, and a great number of physicians confirms the researches of MM. Fourcroy, Dumeril, Orfila, and Cruveillier, who have found globules of mercury

in the bones, cerebral substance, and in the nerves.—*Journal des Progrès, Vol. VII.* 1828.

65. *Chemical Analysis of the Root of the Polygala Senega of Virginia.*—M. **Giacomo Folchi**, Professor of Materia Medica at Rome, has analysed the root of the polygala senega, and found it to consist of a thick oil, in part volatile; free gallic acid; an acrid matter; a yellow colouring matter; a little wax; gummy extract; azotised matter similar to gluten; woody fibre; subcarbonate, sulphate, and muriate of potash; carbonate, sulphate, and a little phosphate of lime; carbonate of magnesia; iron and silex.—*Biblioteca Italiana Milano, October*, 1827.

MISCELLANEOUS.

66. *Case in which a great number of Larvæ were Hatched in the Body of a Man.*—M. **Jules Cloquet**, has recently communicated to the Philomathic Society the following curious case. "A rag-gatherer, in a state of complete drunkenness, and not knowing where he bent his steps, laid himself down in a field near several dead horses. He slept there for twenty-four hours. On awaking he felt as if he was swelled out, and experienced a pain which he did not usually feel, under similar circumstances. He returned home, but shortly a number of swellings like blisters rose on his head, and worms crawled out of his nose and ears, and other natural openings of the body. Alarmed at this phenomenon, he repaired to the Hospital St. Louis. The swellings on his head were then opened, and a prodigious quantity of worms crawled from them; his skin produced them every instant; and a nurse placed to collect them as they appeared, gathered as many as three plates full of them. Several means were tried on the rag-gatherer to destroy these worms, such as lotions and baths of sulphureous vapour, but fruitlessly. M. Cloquet then proposed friction with mercurial ointment, and by this treatment he was perfectly cured. But the unfortunate man has lost both his eyes, which have been destroyed by the worms, which are exactly like those vulgarly known by the name of *asticats*. It is conjectured, that the flies which were upon the dead horses, laid their eggs during the man's sleep in the pores of his skin, and the natural openings of his body, and that the warmth hatched the eggs which produced the enormous quantity of worms that have been gathered from his body. The rag-gatherer is now in good health; and, although blind, as gay as ever, promising himself to get as jolly as heretofore, but not again to sleep in the fields."

67. *Medical Statistics.*—According to Susmilch's Tables, the mortality under ten years of age, in Germany, is 43 per cent. for the country, 47.7 for small towns, and 50.2 for large cities.

In France, according to Duvillard, it is 44.89, on the average of the kingdom.

68. *Mean Duration of Life in Geneva.*—M. **Odier** has published in the *Bibliotheque Universel de Genève*, t. 36, 1827, some highly interesting observations on the mean duration of life in that city at different periods. From these it appears, that from 1560 to 1600 the mean duration of life was eighteen years and five months; from 1600 to 1700, twenty-three years four months; from 1700 to 1760, thirty-two years eight months; from 1761 to 1800, thirty-three years seven months; from 1815 to 1826, thirty-eight years ten months.

AMERICAN INTELLIGENCE.

Case of Gastro-meningeal Irritation cured by Metastasis—forming Ecchymosis. By Samuel Jackson, M. D.—Mr. C. R. aged twenty one—light-coloured hair, fair, pale skin, nervoso-lymphatic temperament, was seized on Friday, 14th March, with head-ache, pain in back, loss of appetite, and thirst. These symptoms continued, unabated, but not sufficient to confine him to bed. Tuesday, 18th—had slight epistaxis, but received no relief. On Thursday, 20th—head-ache increased, with dimness of vision; I saw him this day, and found the pulse full and corded—tongue foul; advised venesection and pediluvium, with a cathartic, and restricted diet, but which was not attended to. In the night the helix of the lobe of each ear became of a deep purple colour—was ecchymosed. Friday, no abatement of symptoms—visited in the evening a friend, and while playing at loto, the hands suddenly became swoln, tense, and the fingers covered over with purple spots, similar to those on the ears. In the night, felt an unpleasant sensation in the end of the nose, which, in the morning, was considerably swoln—nearly double its usual size, and the lower half of a deep purple, approaching to black, from extravasated blood. Head-ache and the other uncomfortable feelings entirely dissipated. He has remained in better health than he had possessed for some time previous. The discolouration of the skin did not disappear for eight or ten days.

This case presents several interesting points—first, it offers an example of the manner in which the animal economy remedies its disorders. Gastric and meningeal disease existed, (thirst, loss of appetite, foul tongue, with head-ache, and dimness of vision,) which were immediately relieved by a metastasis to the end of the nose, attended with extravasation of blood into the substance of the skin.

Second, it furnishes an instance of misplaced hæmorrhage—and exhibits the connection between extravasations and hæmorrhages, and the identity of affections apparently having no analogy. Had the organic excitement, that was set up in the skin of the nose, occurred in an internal mucous surface, a hæmorrhagy would have resulted—epistaxis, hæmoptysis, or hæmatemesis, according to the surface whence it proceeded; or had it taken place in the cerebral structure, apoplexy and paralysis would have been produced. We perceive also, that as the phenomena of this case were excited by a simple gastric irritation, the diseases mentioned, analogous in their mechanism, so to speak, may have the same origin.

Third, the purple spots on the fingers and ears, were precisely similar to the petechiæ of malignant fevers, and which are caused in a like manner by a local hæmorrhage or extravasation into the skin.

Some account of the effects of the Respiration of Cool Air in Pulmonary Diseases. By Dr. C. Drake, of New York. Extracted from a letter to his friend, Dr. J. R. Smith, of Philadelphia.—"I have no medical intelligence to give you, except it be a plan I have devised for the treatment of pulmonary diseases. It consists in causing the patient to breathe *cool air*, while the cutaneous surface is maintained in a state of preternatural excitement, by placing him warm in bed or by enveloping his thorax with some stimulant application. I was led to the adoption of this means, by reflecting on the laws of sympathy, as inculcated by M. Broussais. That eminent physician contends, as you well know, that the sympathies between the skin, and mucous membrane of the primæ viæ are direct—that the stimulations of the one are directly repeated in the other; and he hence disapproves of the employment of blisters and other irritating applications to the abdomen, in gastritis, enteritis, &c. On the other hand, he says, that the sympathies between the skin and the mucous membrane of the lungs are reversed—whatever debilitates the former, and repels the blood from its texture, tends to irritate the latter, and produce a sanguineous congestion in the pulmonary organ, a preliminary condition of inflammation. If such be the case, one would naturally suppose that a rational mode of treating pulmonary inflammation, would be, to place the system as far as possible, in a condition the reverse of that which has produced the disease. I have accordingly submitted the plan to actual trial in a number of cases in the state prison of this city, and the beneficial effects that I have uniformly obtained, render me somewhat sanguine of the value of the remedy. I do not believe that it can be solely depended upon in the treatment of acute inflammations, but conjoined with other antiphlogistic means, it may become a powerful auxiliary. Neither do I expect it will prove a remedy for phthisis pulmonalis; for by the time the disease commonly receives this fatal appellation, the pulmonary tissue is so deeply altered and ruined, as to place the disease in very many cases beyond the control of medical agents; but I think it will be found to be of signal service in the early stages of these chronic inflammations. Surely, by creating a general revulsion to the external parts of the system, by means of external heat or other stimuli, and at the same time directly introducing into the inflamed lungs cold, which by its sedative properties is so efficient in allaying inflammatory irritation, and repelling the preternatural flow of blood from inflamed parts, we place the pulmonary organ in a condition well calculated to enable it to throw off the morbid action, and regain its healthy tone and functions. But facts are doubtless better than reasonings on this subject, and I will proceed to relate to you the way in which I submitted my patients to a trial of the remedy, and the results I have obtained from it.

"In order to excite and maintain the action on the surface of the body, the chest was enveloped in a vest padded with wool and lined with fur, and the patient covered warm in bed, or he was placed in a bath heated to 98°, and in this situation caused to inspire, through a tube, cool air brought from the external atmosphere, when the weather was sufficiently cold; otherwise, drawn from a reservoir in which it was cooled to about 40° of temperature, by means of ice. The operation was usually directed to be continued one hour, and repeated thrice a day; but the patients were frequently induced, from the benefit they thought they derived from it, to continue it much longer and to repeat it more frequently. They did not seem to receive any greater advantages from the warm bath than from the other mode of exciting external heat, and as its use was attended with much inconvenience, I have of late seldom employed it. The uncommon mildness of the past winter, prevented me from using air lower than 28° of temperature, which of course was raised a few degrees higher by the time it reached the mouth. None of the patients complained of such air being too cold. I found that when its temperature was not higher than 50°, it seemed to make a decided impression, and that about 40° is the temperature that answers the desired purpose very well. I have accordingly of late brought the air to that point; and, from many trials, have no doubt that from four to six quarts of ice, even in summer, will cool a sufficient quantity for a day's consumption.

"It is, I think, during the hot season, when the skin is constantly kept in an excited state, and the other secretory organs are in full play, that the remedy promises to be of more advantage in chronic inflammations than it can possibly be during the cold and variable weather of winter.

"The sensible effects produced by the remedy were tolerably uniform. When the temperature of the inspired air was not above 50° it invariably produced an agreeable sensation of coolness in the chest, occasionally with darting pains extending to the shoulders, which the patients referred to the external and muscular parts. On persisting in the use of the remedy for a long time and repeating it frequently, they sometimes complained of a sense of soreness and fatigue in the direction of the diaphragm, and sometimes also of fulness of the head and vertigo. The most constant effect on the pulse was to render it fuller: when it was preternaturally frequent, it commonly rendered it slower; in some instances diminishing it ten to twenty pulsations in a minute; in a few cases, however, especially where it was rather slow, it rendered it somewhat more frequent. It very generally mitigated the cough, diminishing its frequency more than one-half in the course of two or three days, and rendered the expectoration freer and easier, so that the patient would frequently throw it up almost without effort. The effects on the cutaneous function were not less decided: it diminished the morbid heat, and rendered the skin more pliable and pleasant to the feel. The patients that used the remedy to any extent complained continually of great hunger, and it was with difficulty that I restrained them to a moderate allowance of vegetable food.

"Heretofore, in order to give the remedy a fair trial, I have employed it unaided by other means than the observance of low diet, and the benefits resulting have been too uniform and decided to be merely accidental. In one recent case of catarrh, it completely removed the affection in twenty-four hours. In all the old pulmonary cases it has greatly alleviated the disease; and notwithstanding the unfavourable circumstances under which these patients are placed, it still seems to be rendering them service. In one case where the cough was almost incessant, I succeeded, in a few days, in allaying it so much as to enable the patient to sleep quietly all night, and his cough is now comparatively rare and trifling. In two cases of asthma, of many years' standing, the patients acknowledged that the remedy had afforded them more relief than any other means they had employed. The fulness of the pulse, the muscular pains, and the affection of the head, appear to indicate that the blood is diverted from the thoracic organ, and accumulated in other parts of the body. If such be the case, small and repeated venesections would render the effects of the revulsion from the lungs more permanent, and materially aid in removing the chronic engorgements.

"Dr. Binsse, the resident physician of the prison, has attended to the administration of the remedy, and taken copious notes of the progress of the cases, which I shall at some future day condense for publication.

"In my next letter I will describe the refrigerator and the other parts of the apparatus, that I have contrived, for the application of this new remedial agent."

Process for Nitric Ether, or Sweet Spirits of Nitre. By R. Hare, M. D. &c. &c. —This ether may be obtained in a diluted state, by distilling alcohol with diluted nitric acid, or with nitre and sulphuric acid. When sulphuric acid is used, the product is liable to consist, in part, of sulphuric ether.

Thenard informs us, that, to obtain pure nitric ether, equal parts of alcohol, and of the nitric acid of commerce, may be mixed and distilled with great caution; the product being passed into a series of Woulfe's bottles, the first empty, the others half filled with brine, and surrounded by a freezing mixture. As soon as the reaction commences, it increases rapidly, so that it is necessary to check it, by cooling the retort.

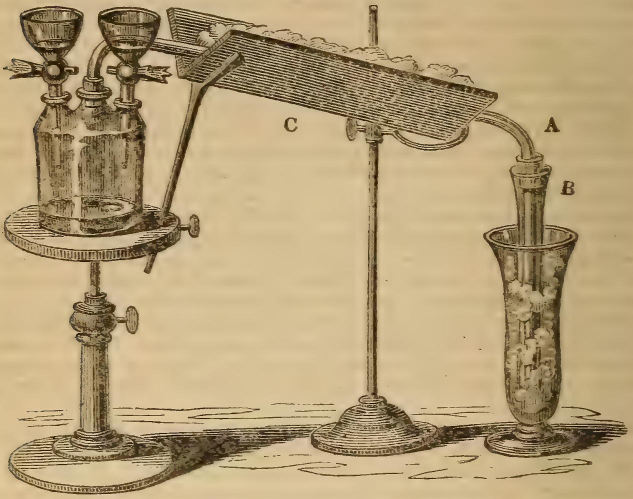
I subjoin an engraving and description of a method which I have contrived for generating nitric ether.

I am of opinion that it would be advantageous if the prescriptions of our physicians were made with a reference to ingredients of a high degree of purity. The physician should know how much real nitric, or sulphuric, ether is contained in the diluted article which he directs his patient to use. Hence pure nitric, or sulphuric ether, should be prescribed, adding as much alcohol or water as he may deem necessary. Agreeably to the present practice, it is in the power of manufacturing chemists to impoverish etherial preparations, with little danger of detection.

The formula for sweet spirit of nitre, in Brande's Manual of pharmacy, allows but three ounces of nitric acid to a quart of alcohol. According to Thenard, the quantity of ether, when the materials are in the ratio of equality, amounts to two-thirds of the weight of the acid. Hence it is probable that the quantity of ether produced, according to the formula alluded to, is not more than two ounces, or one-sixteenth of the alcohol.

It is worthy of inquiry, whether a mixture of pure nitric ether, and water, in the same proportion, would not be preferable in many cases.

Apparatus far the Generation of Nitric Ether.



Let a tube, A, at least three feet long, and tapering from three-fourths of an inch to one-half inch in diameter, be so bent at each end, that the larger may fasten air tight into the middle orifice, of a three-necked bottle, the smaller end entering another tube, B, standing nearly upright in a freezing mixture, in any convenient vessel. The tube A, must be so inclined, that any liquid condensing in it, must run into the tube B, and must be surrounded by a freezing mixture, supported about it, by the wooden trough C. It has been mentioned, that, into one of the orifices of the bottle, one end of the tube is to be inserted. Let each of the two other orifices be furnished with a glass funnel, with a glass cock. Having made these arrangements, pour through one of the funnels about as much strong alcohol as will cover the bottom of the bottle nearly a half inch in depth. Next, by means of the other funnel, cautiously add as much concentrated nitric acid, as will cause an active ebullition. When the boiling relaxes, add more acid, and repeat the addition till it ceases to renovate the ebullition. In like manner add more alcohol, till the evolution of vapour can no longer be excited in this way. Afterwards, resort may again be had to the acid. Meanwhile, the ether, generated by this process, will be condensed by the artificial cold in both tubes, and in consequence of their relative situation, will be deposited, in the liquid form, in the smaller tube only.

Without the aid of ice, refrigerating by cold water merely, I have obtained, by means of this apparatus, an ounce of nitric ether from two ounces of alcohol. Instead of the funnels I find it better to use two tubes surmounted by funnel-shaped mouths. The perforation in the tube for introducing the acid, should not be larger than a knitting needle. The perforation in the other tube, may be about the tenth of an inch in diameter.

Some Observations respecting the Oil of Wine. By R. Hare, M. D. &c. &c.—The oleaginous liquid, called oil, or sweet oil, of wine, which towards the termination of the process in making sulphuric ether, comes over separately, or in union with alcohol forming Hoffman's anodyne liquor, is alleged by Faraday and Hennel, to be a compound of carbon and hydrogen with sulphuric acid. During the process, an acid, which has been called the sulphovinic acid, is generated, and remains in the retort. This compound is represented by these skilful chemists, as containing the same quantity of sulphuric acid as the oil of wine, with only half as much carbon and hydrogen.

Thenard, who has not noticed this statement, represents the sulphovinic acid as a compound of hypo-sulphuric acid, with a peculiar vegetable matter; and that the oil of wine differs from ether only in containing less of the elements of water.

I find that when the oil of wine is mixed with the most concentrated nitric acid, a reciprocal decomposition ensues, and that the resulting liquid affords a precipitate with solutions of barytes, demonstrating the production of sulphuric acid, and consequently the presence of sulphur. This confirms the statement of Faraday and Hennel.

Whatever may be the composition of this oil, it appears medicinally to be a very important product, although not duly appreciated, in this respect, in England and France.

Brande alleges that it "is of no use in medicine." According to Thenard, sulphuric ether, united to alcohol, forms Hoffman's liquor.

I have the authority of my colleagues, Drs. Physick and Dewees, for asserting that a solution of the sweet oil of wine in alcohol, is highly "*useful in some disturbed states of the system in tranquillizing it, and disposing to sleep*," being, in such cases, far preferable to, and very different in its effects from, a mixture of ether and alcohol.

Alcohol, containing this oil, produces a milky appearance with water, in consequence of the precipitation of the oil which is insoluble in water. This Dr. Physick had long remarked as an essential attribute of the genuine Hoffman's anodyne liquor. At one period, there was scarcely any to be found in the shops in this city, which possessed this essential characteristics, but the defect having been pointed out, has been corrected by some of our druggists.

In the old way of making sulphuric ether, a certain quantity of Hoffman's anodyne had always been obtained towards the close of the process; but a new process was introduced, agreeably to which, an additional quantity of alcohol being added, before the materials could reach the state of concentration requisite for producing oil of wine, the anodyne liquor ceased to be a concomitant product of sulphuric ether. Hence a mixture of ether and alcohol was used as a substitute for it.

Case of Salivation from the External Application of Tartar Emetic. By R. Eglesfeld Griffith, M. D.—J. M. æt. 50, was treated for hydrothorax and œdematous swellings of the lower extremities, by active depletion, and purging with crem. tart. and jalap, no mercurial preparation was used; he also was directed to use an external application of tart. ant. ointment to his breast. This he persevered in till a large crop of pustules were produced. Shortly after their appearance, his gums became sore, and a violent salivation ensued, which lasted for nearly two weeks: he used about ℥iss. of the ointment; it was made with ʒij. of tart. ant. ℥j. axung. He is now convalescent, his disease having gradually disappeared under the salivation. Dr. Jackson has also met with an instance in which salivation was produced by the external application of tartar emetic ointment.

Dislocation of the Os Humeri, with Fracture of the Neck of the Bone.—"Feb. 2, 1828.—Entered the Mass. Gen. Hospital a young man, who had had a severe injury in the arm, four weeks previous to this day. His arm had been caught in the strap of some machinery at Waltham, and torn out from its socket, and ths os humeri fractured at its neck, just on the outside of the joint. Dr. Adams being called, made some attempts at reducing the dislocation; but having no control of the head of the bone, on account of the fracture, he found it impracticable to make any impression on it. He therefore secured the fractured bone and waited till the third week, when, finding the bone united, he brought the patient to Boston, and took the advice of Dr. Warren as to the expediency of an attempt to reduce the bone, still out of its socket. Dr. W. thought that the union of the bone was too recent to bear the application of force sufficient to reduce the dislocation, and recommended to wait the expiration of four weeks before making an effort at reduction.

"At the end of this time he came into the hospital, and on examination the head of the os humeri was felt in the axilla. The neck of the bone appeared firmly united and somewhat enlarged by callus. The patient, a muscular young man of 19, was informed that a trial might be made to reduce the arm to its socket. That the success of the operation was uncertain; first, on account of the ossific matter thrown out near the articulation; second, the possibility of a separation of the fracture; and, third, the duration of the dislocation; which, though not always an insuperable difficulty, was so frequently. The patient wishing the trial to be made, was placed on a seat in the operating theatre. A sheet being passed round the body and a band over the scapula of the injured side, were confined by cords to a staple on the opposite side of the room. The pullies were then attached to the injured arm above the elbow, in a direction to draw a little above a horizontal line. All things being ready, Dr. Adams was requested to open a vein in the sound arm of the patient, and draw blood till he was faint. This being effected, the pullies were put in operation. The management of the scapula was committed to Dr. Hayward, assistant surgeon of the hospital. Then Dr. Warren, seizing the affected arm, operated with it as a lever, to break away the adhesions it had formed. The power of the pullies was gradually increased, and, with occasional intervals, but never any relaxation, was kept increasing for half an hour. The patient's courage was now exhausted, and he begged to be let alone. The power was increased till it required the strength of one person to draw the cord of the pullies. Now, the surgeon placed his knee under the head of the bone, used it as a fulcrum to raise the head of the os humeri from its place. The adhesions were heard to crack, and some fears were entertained that the fracture cracked also. The extending power was increased a little, and then suddenly relaxed, and the bone resting on the knee of the surgeon was thrown up, and came into its socket with an audible noise—to the great satisfaction of the patient; who at once recovered his arm and was released from his pain.

"Very little inconvenience followed the use of this violence. None of the exposed parts swelled, and in three days he left the hospital with the use of his arm restored."—*Boston Medical and Surgical Journal, No. I.* 1828.

Neuralgia cured by Excision of a portion of the Nerve.—Professor WARREN relates in the Boston Medical and Surgical Journal three cases of neuralgia cured by excision of a portion of the nerves. We regret that we have not room in our present number for the details of these cases.

New Instrument for Applying Ligatures.—Dr. J. K. MITCHELL has invented an instrument for the application of ligatures in fistula in ano, &c. We are promised a description and figure of it for our next number.

Transactions of the Medical Society of the State of New York, for the year 1828. *With the annual Address.* By T. ROMEYN BECK, M. D. President of the Society.—The medical society of the state of New York, is vested with very extensive powers, which, if discreetly and wisely exercised, cannot fail to elevate the character of the profession, and benefit the public generally. We notice among the proceedings of the present year, the expulsion of a member for lending his support and sanction to the practice of an empiric—the proposal of a prize of one hundred dollars for the best essay on "the history, causes, and treatment of typhus fever"—some resolutions expressive of the opinion of the society, that the habitual use of ardent spirits is highly injurious, and that they will discourage its intemperate employment—the appointment of T. R. Beck, M. D. as a delegate to the national convention, to assemble in Philadelphia on the first Tuesday in May, for the purpose of proposing a more uniform system of medical education—and some other transactions of a private character.

Following the transactions is an appendix containing the revised statute concerning the medical profession; the by-laws of the society; classification of counties; resolutions requesting contributions to the medical prize fund; standing committee on by-laws of county medical societies; regulations concerning prize dissertations; schedule of donations to medical prize fund; and lists of members, of officers, and licentiates. The whole is concluded by the annual oration by the president T. Romeyn Beck, M. D. The address is on the subject of medical evidence, and like every thing from the pen of its talented author, exhibits considerable research and erudition, and is highly interesting and instructive.

Dewees's System of Midwifery.—Messrs. CAREY, LEA & CAREY have recently published a third edition of Professor Dewees's valuable System of Midwifery. This edition has been almost entirely re-written, and besides numerous additions to the subjects previously treated of, contains the following new chapters: On the Development of the Fœtus—On the Term of Utero Gestation—On the Cause of Labour—On Tedious Labour—On the Inversion of the Uterus, with four plates illustrative of its mechanism—On Presentations and falling down of the Umbilical Cord, with a plate—History of the Cæsarian Operation—On the Section of the Pubes—On the Secale Cornutum.

Boston Medical and Surgical Journal.—The New England Journal of Medicine and Surgery, and the Boston Medical Intelligencer have been united under the name of the Boston Medical and Surgical Journal. This Journal is published weekly, in numbers consisting of sixteen pages 8vo. and is conducted with great ability; the numbers we have received contain much interesting information.

Introductory Lecture delivered at the commencement of the Fourth Session of the Medical College of South Carolina. By SAMUEL HENRY DICKSON, M. D. Professor of the Institutes and Practice of Medicine.—We regret that our limits restrict us to a mere annunciation of the publication of this eloquent and interesting lecture.

Western Journal of the Medical and Physical Sciences.—Dr. DRAKE has withdrawn from the editorship of the Western Medical and Physical Journal, and proposes to edit a new Journal under the title of the Western Journal of the Medical and Physical Sciences. The well-known talents, erudition, and industry of Dr. Drake are a sufficient guarantee for the value of the proposed publication.

A System of Operative Surgery.—Professor GIBSON is preparing for publication a System of Operative Surgery; it will be illustrated by numerous plates.

UNIVERSITY OF PENNSYLVANIA,

MARCH 27th, 1828.

At a Public Commencement, held this day at the Hall of the Musical Fund Society, the Degree of Doctor of Medicine was conferred upon the following gentlemen.

ALABAMA.	SUBJECT OF THESIS.
John A. Cowles, ...	*External Applications.*
CANADA.	
William Blumhart, ...	*Revulsion.*
Joseph Haller, ...	*Charbon provenant de la Contagion.*
NORTH CAROLINA.	
George S. Bettner, ...	*Ulceration of the Intestines.*
Edwin E. Slade, ...	*Trachitis.*
Armand J. De Rosset, . . .	*Cynanche Trachealis.*
Harwood P. Perry, ...	*Acute Rheumatism.*
Henry M. Jeter, ...	*Mercurial Disease.*
William G. Hill, ...	*Erysipelas Facialis.*
Nathaniel M. Comer, . . .	*Bilious Continued Fever.*
John L. Wright, ...	*Cholera.*
Reading S. Long, ...	*Acute Peritonitis.*
SOUTH CAROLINA.	
John A. Wragg, ...	*Indigestion.*
Lynch H. Deas, ...	*Strictures of the Urethra.*
Francis Johnson, ...	*Vermes Intestinorum.*
John M. Raiford, ...	*Acute Rheumatism.*
James T. Leckie, ...	*On the Process employed by Nature in suppressing Hæmorrhage.*
Evans L. Amacker, . . .	*Cynanche Trachealis.*
James Jordan Vernon, . . .	*Pathology of Hæmorrhage.*
DISTRICT OF COLUMBIA.	
James Jones, ...	*Diabetes.*
Charles G. English, . . .	*Cathartics.*
DELAWARE.	
Alexander Wm. Reynolds, .	*Cholera Morbus.*
Phocion P. Lewis, ...	*Hydrothorax.*
GEORGIA.	
John A. Urquhart, ...	*Dentition and Cholera Infantum.*
Wm. Woodson Waddel, . .	*State of the Biliary Secretion in Fever.*
Edward R. Ware, ...	*The Effect of the eighth pair of Nerves on Respiration and Digestion.*
Thomas J. Charlton, . . .	*Melancholia and Hypochondriasis.*
James B. Walker, ...	*Topography, Climate, and Diseases of Burk county, Georgia.*
Paul F. Eve, ...	*Uterine Hæmorrhage.*
Reuben Y. Reynolds, . . .	*Inversio Uteri.*
Stephen Bailey, ...	*Mercury.*
WEST INDIES.	
Jos. H. Robinson, ...	*Cornus Circinata.*
NEW JERSEY.	
Hudson S. Burr, ...	*Scarlatina.*
Joseph Pancoast, ...	*Erectile Tissue.*
Robert A. Hunt, ...	*Ascites.*
John B. Tuft, ...	*Delirium Tremens.*
Lewis B. Hunter, ...	*De Hydrope.*

Francis A. Ewing,	*Disguised Intermittent.*
Benjamin W. Blackwood,	*Derangements of Digestive Organs.*
Maurice Beesley,	*Euphorbia Ipecacuanha.*
William J. Johnson,	*Lithotomy.*
William M. Fenimore,	*Pertussis.*
John H. Stokes,	*Erysipelatous Inflammation.*
Joseph Warrington,	*Diseases in the western part of Burlington county.*
Charles Ellis,	*Bubonocele.*
KENTUCKY.	
John Wilson Hunt,	*Hæmorrhoids.*
MARYLAND.	
Charles W. Johnson,	*Aneurism from Anastomosis.*
John L. Dorsey,	*Pneumonia Biliosa.*
Thomas S. Herbert,	*Lithotomy.*
Burton Randall,	*On the Identity of Electricity and the Nervous Influence.*
John W. Anderson,	*Rubeola, or Measles.*
MASSACHUSETTS.	
Edward Staples,	*Opium.*
PENNSYLVANIA.	
Horatio N. Glentworth,	*Digitalis Purpurea.*
Jesse K. Bonsall,	*Phlegmasia Dolens.*
Aristide Rodrigue,	*Experiments on the use of the Ligature and Cupping-glasses in Poisoned Wounds.*
Robert Bridges,	*Neuralgia.*
Anthony C. Percival,	*Aneurism.*
Samuel Stones, Jr.	*Nature and Properties of the Blood.*
George Fox, Jr.	*Colic.*
Charles Willing,	*On the primary seat of Disease in Fever.*
Andrew E. Kennedy,	*Rheumatism.*
William Whelan, Jr.	*Moxa.*
William S. Zantzinger,	*Erysipelas.*
George Spackman,	*Hydrothorax.*
Uselma A. Clarke,	*Cynanche Trachealis.*
Robert Rogers,	*Hæmorrhoidal Diseases.*
Henry Umstad,	*Acute Hepatitis.*
Joshua Rhoads,	*On the Circulation of the Blood.*
Hiram Corson,	*Tetanus.*
Charles H. Bessonett,	*Pertussis.*
George Clymer, Jr.	*On Causes of Epidemic Diseases.*
Jacob P. Thornton,	*Cholera Infantum.*
Charles Evans,	*Rheumatism.*
John B. Dick,	*Hirudo Medicinalis.*
Edward Chandlee,	*Hæmoptysis.*
Adam R. Stouch,	*Inversio Uteri.*
John W. Reese,	*Amenorrhœa.*
Israel T. Smith,	*Hepatitis.*
Caspar Wistar Pennock,	*Experimental Researches on the efficacy and modus operandi of Cupping-glasses in Poisoned Wounds.*
Jehu G. Peters,	*Amenorrhœa.*
Benjamin C. Tomlinson,	*Case of Luxated Hip Joint.*
William B. Watson,	*Puerperal Fever.*
Henry L. Aitkin,	*Jaundice.*
Jeremiah F. X. M'Credy,	*Miasmata.*
George Kuhn,	*Dysentery.*
William L. Vanhorn,	*Dysentery.*
Jacob Wagenseller,	*Epidemic of Bucks county.*

Solomon Temple,	*Hydrorachitis.*
William M. Fahnestock,	*Myrica.*
Gideon G. Palmer,	*Hæmorrhoids.*
Enoch P. Hoopes,	*Hepatitis Acuta.*
Robert Morton,	*Colica Pictonum.*
Charles Pearson,	*Gonorrhœa.*
Alexander H. Barnitz,	*Acute Rheumatism.*
Nathaniel B. Goodman,	*Functions of the Lungs.*
Henry C. Pratt,	*Amputation.*
RHODE ISLAND.	
Samuel B. Tobey,	*Opium and its Officinal Preparations.*
TENNESSEE.	
Reuben A. Gentry,	*Fractures, Dislocations, and Gun Shot Wounds.*
Robert N. Strong,	*Extirpation of the Parotid Gland.*
VIRGINIA.	
James H. Gregory,	*Bilious Fever.*
Francis R. Gregory,	*Strictures of the Urethra.*
Andrew Barclay,	*Empyema.*
Jos. G. Gray,	*Digestive Mucous Membrane.*
Henry Myers,	*Paralysis.*
Frederick Horner,	*Altered condition of the Tongue in Disease.*
Samuel P. Byrd,	*Hepatitis.*
James T. Barclay,	*Saccharine Matter.*
Littleberry G. Wynn,	*Smyrnium Trifoliatum.*
John R. W. Dunbar,	*On the Structure, Functions, and Diseases of th Nervous System.*
George Stubblefield,	*Fractures of the Extremities.*
William Collins,	*Mania à Potu.*
Frederick W. Harrison,	*Amenorrhœa.*
Peyton R. Berkeley,	*Injuries of the Head.*
George W. Tinsley,	*Deranged Menstruation.*
James T. Boyd,	*Cynanche Trachealis.*
William W. Carrington,	*Hydrophobia.*
Richard B. Alexander,	*On Juniperus Sabina, and Juniperus Virginiana.*
James B. Maclin,	*On the resemblance and means of distinguishing Chronic Hepatitis and Tubercular Consumption.*
Robert Braden,	*Remittent Fever.*
Thomas E. Spencer,	*Gonorrhœa.*
Joel B. Sturdivant,	*Acute Hepatitis.*
Theophilus Meade,	*Mercurial Salivation.*
Hughart Montgomery,	*Wounds of the Articulations.*
Augustus G. D. Roy,	*Hepatitis.*
Thomas W. Bass,	*Icterus or Jaundice.*
William T. Maclin,	*Use of Iodine in Bronchocele.*
Thomas Parham,	*Cholera Infantum.*
William Finney, Jr.	*On the process adopted by Nature, in the restoration of wounds and other injuries of the Human System.*
John Batte,	*Intermittent Fever.*
Henry Lee Heiskell,	*Extra-Uterine Pregnancy.*
James C. Hazlewood,	*Acute Gastritis.*
NEW YORK.	
William N. Duane,	*Purulent Ophthalmia.*
Charles G. Fowler,	*Tubercular Phthisis.*

TOTAL, 133. W. E. HORNER, *Dean.*

COLUMBIAN COLLEGE IN THE DISTRICT OF COLUMBIA.

The third Annual Commencement of the Medical Department of this Institution, was held on the 12th of March, 1828. The following is a list of the graduates, and the subjects of their inaugural theses:—

Joseph S. Baker, of Georgia, *on Inflammation.*
Joseph Borrows, of the District of Columbia, *on the Pathology of the Mucous Membranes.*
John A. Bulfinch, of Massachusetts, *on Tetanus.*
Silas L. Condict, of New Jersey, *on Digestion.*
Robert A. Cony, of Maine, *on the Stimulus of Distention.*
John F. Edmonds, of Virginia, *on Morbid Sensibility of the Seminal Organs.*
Alexander M'D. Davis, of the District of Columbia, *on Chorea Sancti Viti.*
Charles W. Davis, of the District of Columbia, *on Puerperal Fever.*
Charles M'Lean, of the District of Columbia, *on Humoral Pathology.*
Harvey Lindsley, of New Jersey, *on Scrofula.*
William N. Waters, of the District of Columbia, *on the Use of Oleum Terebinthinum.*
Noble Young, of the District of Columbia, *on Marsh Miasma, as producing Fever.*

F. MAY, *Dean.*

CENTRAL MEDICAL SOCIETY OF GEORGIA.

The Central Medical Society of Georgia, instituted for the promotion of medical science and its collateral branches, was organised in December last.

The following officers were elected for the ensuing year:—

MILTON ANTONY, M. D. *President.*
S. BOYKIN, M. D. } *Vice Presidents.*
W. P. GRAHAM, M. D. }
ALEXANDER JONES, M. D. *Recording Secretary.*
BENJAMIN A. WHITE, M. D. *Corresponding Secretary.*

Dr. Alexander Jones was appointed to deliver the annual oration before the Society at its next session.

A committee consisting of Drs. Jno. Walker, J. Dent, S. Boykin, and B. A. White, were appointed for the purpose of framing a code of medical ethics, with a view to publication, and to report at the next annual meeting.

A constitution and by-laws, containing the usual provisions of such codes, were adopted for the government of the Society.

NECROLOGY.

Died on the 19th of November, 1826, at Lexington, Georgia, Dr. Joel Abbott, aged sixty years.

Dr. Abbott was born at Ridgefield, Connecticut, on the 17th of March, 1766. At the early age of ten, he had the misfortune to lose his father, a practitioner of medicine, of great benevolence and liberality, and who died young, and left his family in very indigent circumstances. The support of a mother and two sisters soon devolved upon the subject of this notice, and he performed this duty with the utmost affection. His early thirst for knowledge was strongly marked, but his surviving parent and friends could afford him no assistance in gratifying it. Nature, however, had endowed him with a bias for learning, too strong to be overcome by the barrier of unpropitious circumstances. It is stated that he would, during the summer, labour to procure funds to spend in the winter on his education; and that he often studied arithmetic by fire-light. After thus acquiring, by unwearied industry, the rudiments of an education, he commenced the study of medicine in his native town, with Dr. Perry. After qualifying himself for practice, by the best aids the country in which he resided afforded, he commenced the active duties of the profession in conjunction with Dr. Belcher. On dissolving his connection with that gentleman, he received from him, and also from Dr. Amos Mead, a very flattering certificate of his qualifications as a medical practitioner. About the year 1790, Dr. Abbott arrived in Georgia in very indigent circumstances, and settled in Columbia county, but soon removed to Wilkes county, where he commenced practice, in the year 1794. His uniform urbanity, politeness, and close attention to the duties of his profession, soon gained the affections and esteem of the inhabitants, and obtained for him an extensive and lucrative business, which he continued to enjoy for fifteen or sixteen years. During this period he never relaxed his characteristic fondness of study. Possessing a sound judgment, cultivated by extensive reading, and with a retentive memory, it is not surprising that he should attain great eminence in his profession. He was consulted by wealthy families, thirty and forty miles from his residence; and displayed in the treatment of many chronic diseases uncommon skill. He was extremely liberal, and appeared to practice medicine, not so much for the emoluent it afforded, as for the pleasure of dispensing its benefits to the sick and distressed; therefore, notwithstanding his extensive practice, he never realized more than a comfortable subsistence. When his friends desired to know why he did not accumulate more, he said, experience had convinced him that a large patrimony was not the best inheritance to leave children.

His reputation as a physician, and his cheerful and engaging conversation, attracted a great number of students, and a large proportion of the respectable practitioners now scattered over Georgia, received the rudiments of their medical education under him, and no doubt entertain a grateful recollection of his memory.

To young practitioners he was always kind and attentive. To encourage them—to impart to them every information in his power—and to advise them with regard to their pursuits and best interests, seemed to afford him delight. This kind conduct, and his amiable manners, rendered him universally beloved.

In the year 1809, the popular voice, in a manner scarcely to be resisted, fixed upon Dr. Abbott as a representative in the state legislature, in which office he was continued for seven years. In 1816, he was elected a member of congress, and was retained in that situation for eight years, when his infirm state of health induced him to resign. As an evidence of his popularity it may be stated, that at a time when party spirit ran very high, and it was supposed by his friends that he would lose his election, especially as he stood aloof from all electioneering schemes, he received a greater number of votes than any of the seven members elected except one.

In the year 1820, he was appointed by the Georgia Medical Society a delegate to assist in forming a national pharmacopœia.

Towards the close of 1825, and beginning of 1826, his health began to decline, and he expired in November of the latter year.

He has left few MS. writings, except an account of his investigations respecting magnetism, and some sketches on political subjects.

His life furnishes a striking instance of what genius, aided by industry, can accomplish, and affords encouragement to those who in the pursuit of literary honours, have to contend against the chilling blasts of poverty.

A. J.

EXTRA-LIMITES.

PROCEEDINGS OF THE MEDICAL SOCIETY.

Report of the Committee of the Philadelphia Medical Society appointed to collect facts in relation to the recent occurrence of Small-Pox in this City.

It having been currently reported that several members of the medical profession had lost their confidence in vaccination to such a degree, as to render them willing to recur to the practice of inoculation, and considering the highly important interests likely to be affected by such a rumour, the undersigned were appointed, on the 16th of February, a committee to collect facts in relation to the recent occurrence of small-pox in this city, and report to the society. Accordingly, on the 18th of February last, they issued a printed circular addressed to several physicians of Philadelphia, of which they submit the following copy:—

Sir,

Having been appointed a Committee from the Philadelphia Medical Society to collect facts in relation to the recent occurrence of Small Pox, we have taken the liberty to request of you an answer to the following queries:—

1. Have any cases of genuine Small-Pox, subsequent to Vaccination, come under your *personal* notice?
2. In such cases, what reasons have you for believing that Vaccination was properly performed?
3. How many cases of deaths from modified Small-Pox have come under your *personal* notice, and what were the circumstances attending such deaths?
4. How many cases of small-pox subsequent to previous inoculation or natural small-pox have come under your *personal* notice?
5. In the last set of cases have any and how many deaths occurred?
6. Have any facts come under your *personal* notice, tending in any degree to weaken your confidence in the efficacy of vaccination as a preservative against the *fatal effects* of small-pox?

An immediate reply to the above queries will confer a very great favour on

Yours respectfully,

EDWARD JENNER COXE,
D. FRANCIS CONDIE,
CH. D. MEIGS.

It will be seen, by reference to dates, that a very prompt and kind attention was paid to the above queries by a considerable number of medical pactitioners, whose opinions are entitled to the respect and confidence of this community and the profession at large: among these, we might enumerate several gentlemen, who at an early period rendered the most signal services to the cause of vaccination, and who in the progress of an enlarged experience, and with a more mature judgment, have not lost any part of their confidence in its antivariolous efficacy.

Your committee will not refrain from an expression of thanks to the gentlemen who have so kindly, out of respect to the Medical Society, co-operated in this investigation; this promptitude on their part has been a source of heart-felt satisfaction, not a little increased by the proofs contained in their letters of unanimity as to a great and beneficent doctrine, which, tending to avert one of the most deadly of human evils, deserves, like the doctrines of religion and liberty, the warm support and cordial acceptance of every enlightened citizen. This unanimity so consoling to the friends of vaccination could not have existed, had the doctrines of Jenner depended on unsubstantial hypotheses for their only basis and confirmation.

Although the history of vaccination is a history of its uniform and ascendant progress over all obstacles, whether of ignorance, prejudice, or avarice, there have always been those, who, unwilling or unable to survey the whole subject, which ought to carry conviction to every judgment, have preferred to rely on their own limited experience of a few doubtful exceptions and reject the boon of Jenner, rather than yield assent to a mass of evidence such as has scarcely ever been accumulated in any other department of human investigation. The doubts, hesitancy, and fears of such individuals ought not, and it is believed will not, prevent the extension and ultimate triumph of vaccination; when the variolous contagion, like the Jewish leprosy, shall cease to deform and destroy the race of man. The dogma of Willis, "Convenit enim homini omni, soli et semel, variolis aut morbillis affici," has already ceased to be true or accepted, however true it might have been anteriorly to the researches of Jenner.

Notwithstanding that the anxiety of the public mind and of a very few physicians, in relation to the prevailing varioloid affections, may appear to derive some grounds from the number of persons who subsequent to vaccination have sustained an attack, your committee find it difficult to conceive of the necessity for stronger evidence in favour of the vaccine than is already in the hands of the people. What corroboration in fact is necessary or possible, where it is admitted on the experience of half a century, that millions of lives have been preserved; that variola has from some countries been wholly exterminated, and in most parts of the globe disarmed of its dangers and deformity; that thousands of individuals, protected by its means, have been inoculated, and with impunity exposed to the concentrated contagion of small-pox; in fine, since the growing lights of experience and philosophy teach both reason and the senses that the doctrine of Jenner is incontrovertibly true?

But the public mind, in all the concerns of health, derives its impress, in a great measure, from that of the medical profession, and it is true, that some individuals in this city have freely expressed their doubts and apprehensions in relation to varioloid susceptibility. The ignorance of the public in relation to the laws of the vital actions is not a matter of astonishment or a subject of censure; and the alarm so naturally created by the occurrence of a severe varioloid eruption can only be allayed by the soothing and confident voice of the physician: but that the latter also should take the alarm, and concur in giving wings to rumour, is a circumstance most deeply to be regretted.

It is scarce necessary to state to the society, that this can only arise from imperfect or erroneous views of the power of certain causes to modify, and that permanently, the physical constitution of man.

The proposition to be solved in the premises is not, whether any cause can so change the *structure, irritability* and *sensibility* of the living tissues as to incapacitate them from suffering a second impression from a similar cause; for there is no physiologist who will deny the affirmative to be true. Mankind wish to know whether vaccina can so change the structure or properties of the tissues, as to render them unsusceptible of the impressions of variola. This is the question which agitates the public mind: *Shall we be safe from small-pox if we are vaccinated?* The committee, willing to leave out of the question all the testimony of Europe, Asia, Africa, and the by-gone experience of the whole United States, are prepared to answer, from the documents now on the table, yes:—these documents prove it incontestibly. The society will hear them in a subsequent part of this report.

Who doubts that measles, once suffered, incapacitates that individual, in all future time, from undergoing the same pathological state? And yet what practitioner of a few years' standing, has not witnessed a second attack of rubeola? Is not the same thing true as regards parotitis, varicella, scarlatina, pertussis, &c.? Confessedly, these diseases have been known to attack a second, and even a third time, in numerous instances, ever since they first became the subjects of medical history, and this too, without invalidating the truth of, or preventing the public reliance on the general rule, *that an attack is only sustained once by each individual.*

If this point be conceded, it may be used as an unanswerable argument against those who have so causelessly abandoned their faith in the guardian power of vaccination; for it shows that exceptions to the modifying power occur in all diseases.

The constitutions of men being not all alike, one individual may suffer severely with an undoubted rubeola or variola, without undergoing that perfect and exempting modification which, in another, is effected by a much slighter attack—hence, we not very unfrequently find that individuals, (as in the patients noticed by Dr. Otto and Dr. Condie,) who are deeply pitted from the pustular suppurations of small-pox, are attacked a second time, while those, on whom the arrows of pestilence left not a single trace, escape a second assault entirely, though frequently and openly exposed to the contagion. In this place we may take occasion to say, that it is probable that greater malignity of the virus or miasma will be found to occasion a renewed attack in those partially protected constitutions which, under its ordinary ratio of intensity, would have remained wholly undisturbed. And such an hypothesis may be reasonably adduced in explanation of the more frequent occurrence of varioloid disease since the epidemic constitution first manifested itself in Scotland. Not only has it been proved that the human constitution is susceptible of such modification of textural or vital properties by the *contagious diseases*, it has been clearly shown in Germany, that even *medicinal plants* are capable of withdrawing us from the influence of these contagions: thus, belladonna, which in certain doses produces a scarlet efflorescence or inflammation of the skin, is habitually resorted to by many practitioners in that country, to anticipate, as by a substituent and safe inoculation, the more dangerous or mortal assault of scarlatina; a practice by means of which many lives have already been rescued from a premature termination. This homœopathic practice is but a result of the original proposition of Dr. Jenner.

Jenner's immortality is due to this, that he first invented and successfully practised the art of substituting a mild and safe *animal poison*, to effect that modification of the constitution which previously had only been produced by a harsh and often mortal one.

Your committee will not here use arguments to prove that vaccina is a substitute in this operation for small-pox; or that it produces, without pain or hazard, an equal, if not superior, protective modification of the physical constitution. They leave this question to be again decided on a review of our correspondence, as it has already been for the millionth time in various parts of the globe.

Much of the hesitation and error at present prevailing among us has arisen from the circumstance, that the early friends of vaccination, like those of inoculation, believed and boasted too much: they boldly asserted that vaccination was a perfect safeguard in all cases; and that, too, in the face of numerous facts, demonstrably proving that the most violent course of small-pox could not always withdraw the sufferer from the power of a second infection. It is not surprising that the enemies of vaccination should have seized upon the exceptions, to show that, as a part of the doctrine was untrue, the whole might or must be so. Such is actually the state of things in this city; and it seems to us that if the public could be once completely enlightened as to the *real* degree of efficacy, these exceptions would weigh not a feather against the general tenor and amount of our success, absolute and perfect. Mr. James Moore, author of the histories of vaccination and small-pox, admits that he had been one of these assertors of indiscriminate success, and notices the ill effect of such mistakes, but he reformed, and corrected his error, as most enlightened persons have done beyond the Atlantic. The miserably lean and meagre state of the medical press in this country, which has given us no copy of those works, and many others on the same subject, must be charged with the perpetuation of the error on this side of the ocean; else it would be incredible that so many years of experience and such reiterated announcements should have left any part of the profession in ignorance of their mistake. If the public had been told how far they could rely, they would never have been disappointed.

The varioloid epidemics have produced, it is said, a larger amount of exceptions than had been noticed previously to their occurrence in Scotland and England, where they appeared first about the year 1813, and where they excited the wonder and astonishment of the people, who had so long rested in a confident and undisturbed security under the guardianship of the vaccine.

Your committee are not disposed to deny, that since the year 1813 a far greater number of vaccinated persons have been attacked by a mild and modified small-pox, than had antecedently to that year been affected by it; but this circumstance, which has occasioned such great consternation and fear, will, on a candid inquiry, be seen to redound greatly to the credit and promotion, instead of to the defeat and overthrow, of the Jennerian doctrine and practice.

This is undeniably true, as to the popular confidence in Europe; for it may be safely averred, that the varioloid epidemics, especially those of Norwich and Edinburgh, have confirmed and established its credit with the inhabitants, who, while they have beheld the unusual spectacle of a vaccinated individual affected with a mild and modified variola, frequently met with a severer form of the disease in those who had previously undergone the natural or inoculated small-pox. Finding an invariable security neither from inoculation nor vaccination, they have learned to prefer the latter, as the most invariable and complete protection. The documents on the table teach us that the same results are to be expected from the exactly similar occurrences of the prevailing epidemic of this city.

While on this topic of exceptions, it may not be amiss to observe that there are many circumstances to be offered in explanation and excuse of this greatly augmented occurrence of modified small-pox. The history of the genuine disease is full of examples, showing its greater violence, prevalence and mortality at one time, or during one epidemic constitution, than another. In some seasons it was a mild and safe disease, if compared with its deadly ravages and infectiousness in others. Possibly, the rare appearance of varioloid eruptions, previously to the outbreaking of the Scottish epidemic, may have depended on the mildness of the antecedent constitution; and it is conceived that this supposition derives support from the exceeding great mortality of small-pox occurring in the unprotected since that period, and from the fact that secondary small-pox, or that taking place in persons who had previously been variolated, is infinitely more common and obvious, within the last fifteen years, than it has been in any equal previous duration: so common has this occurrence become, that some have imagined a new and undescribed disease, or have regarded it as an epidemic varicella: but without seeking in these phenomena the evidences of a new and unheard of epidemic, we may more rationally refer them to an augmented intensity and malignancy of the variolous miasma. Moreover, has not the precious boon of Jenner lost, by our familiarity with it, some degree of that almost sacred respect with which its inestimable worth ought to inspire the minds of physicians, who are its sole depositories? Did not a long impunity and uninterrupted enjoyment render us forgetful of the precepts of this momentous subject? Hundreds of persons have been vaccinated by those who were totally unqualified to judge of the genuine or faulty character of vaccina. Is there not a common disregard to the state of the skin and the other requisite provisions for its successful application? Do not three or four careless inspections of the vesicle commonly suffice for all attention and cautiousness; and as to the records of cases, what are they more than a loose charge in the day book, or a treacherous reminiscence of a long-forgotten and common event?

In addition to the above, we may cite the present condition of the vaccine virus in this country, every specimen of which is probably derived in line direct from original samples sent from Europe a quarter of a century ago. It is a very common and loud complaint that we do not communicate vaccine so readily and certainly as we could some years since; and one of our correspondents, Richard Harlan, M. D. suggests that this may be owing to a deterioration of the lymph. He recommends that it should be regenerated by resorting again to its original source.

Having already hinted at the sentiment which has found some degree of currency, viz. that the existing epidemic owes its rise to a poison different from genuine variola, we will, without entering into a discussion of the subject, remark that, from the documents before us, we remain convinced.

1. That the disease, when affecting persons not previously variolated or vaccinated, is the genuine small-pox of authors:

2. That in those who have previously had variola or vaccina, it is small-pox modified more or less, by the state of the constitution:

3. That modified small-pox, or varioloid, as it is commonly termed, may, as to symptoms, approximate indefinitely near to the clearly defined characters of genuine variola.

With regard to the average number of absolute exemptions from variolous influence obtained by the ordinary practice of vaccination, your committee cannot offer any positive information, for want of official documents. In France, more than two and a half millions of persons remained completely exempt during a lapse of thirteen years. And in this city, small-pox found not a single victim in the years 1812, 13, 14, 15, 20, 21, and 22.*

Our present population amounts to about 140,000 souls; and we infer, from the most careful inquiry we have been able to make, that 80,000 of these depend solely on vaccina for their protection against small-pox. One hundred persons died here with variola in the year 1827; and although the mortality bills contain no reports under the head of varioloid or modified small-pox; our documents show that ten persons are said to have died with variolous disease subsequent to vaccination, and that nine persons perished in the same way after previous small-pox. We will examine the pretensions of these cases in another place.

Drs. Mitchell and Bell, in their valuable communication on the epidemic of 1823–4, state that of 248 cases of the disease natural and modified, that came under their notice, 92 proved fatal; to wit, unprotected 85—previous small-pox 6—vaccinated 1. This table alone contains convincing proof of the efficacy of vaccination.

C. Comegys, Esq. President of the Board of Health, obligingly transmitted to us a table, (furnished by Mr. Jos. Pryor, Clerk to the Board,) of the cases of disease reported to the Board since their proclamation in April last.

From the 1st April to 31st December, 1827,	
Small-pox, - - - - - - - - - - -	181
Modified small-pox, - - - - - - - - - -	4
Variola, - - - - - - - - - - -	6
From 1st January, 1828 to 19th February,	
Small-pox, - - - - - - - - - - -	48
	239

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* Dr. Luder, of Altona, states that of 234,959 persons subjected to vaccination in Holstein, from the years 1801 to 1822, only two individuals had been affected with small-pox, so late as the year 1824; while in the same period of time, only one person had been attacked by modified small-pox, out of 447,605 who were vaccinated in the kingdom of Denmark.

From 1st April to 31st December, 1827, Varioloid,	124
From 1st January to 19th February, 1828, Do.	49
	173

The respective numbers are 177 and 235.

From the clerk's letter it will be seen, as above, that in obedience to the requisitions of the proclamation, there have been reported from the 1st of April, 1827 to the 19th of February, 1828, 412 cases of disease, under the several denominations of *small-pox, modified small-pox, variola,* and *varioloid:* but inasmuch as many practitioners have not reported their modified cases at all, and many persons have had it so lightly as to require no medical prescription, we are led to believe that about 1000 cases of the disease have occurred both under its genuine and mitigated aspect. Supposing then that 235 cases of genuine variola had occurred up to the 19th of last month, we have a balance of 765 cases, to place under the heads of small-pox subsequent to variola, and small-pox subsequent to vaccina. The committee will not attempt an estimate of the numbers appropriate to the two last divisions. They only suggest that at least 80,000 vaccinated persons inhabit this city. The ratio of the unprotected and variolated is not to be found.

We will now proceed to lay before the society an abstract of the several letters received in answer to our printed circular, viewing this as the means of communicating the liveliest idea of the actual state of professional sentiment here. In making this abstract many highly interesting details must of necessity be omitted, but it is conceived they will not be lost if securely placed in the archives.

Dr. Atlee, Sen. reports no case of genuine small-pox after successful vaccination; nor death from modified small-pox: but has witnessed one fatal case in an individual who had previously had inoculated small-pox.

Dr. Atlee, Jr. has seen only one case of genuine small-pox in a vaccinated subject. In this case the vaccination had been performed by a "highly distinguished practitioner now deceased," who was satisfied with the vaccine phenomena; but it is worthy of remark that Dr. Atlee found only a *dull white mark* instead of the cicatrix and foveolæ. Has witnessed no death from modified small-pox, nor a case of genuine variola after variola: but "I have seen severe cases of varioloid, after the contagion had been received in either way. None of these were fatal." Lastly, "My own personal observation," says Dr. Atlee, "has in no degree tended to weaken my confidence in vaccination, having tested its efficacy by exposing my own children, and some of my patients to small-pox of a fatal character with perfect impunity."

Dr. W. D. Brinckle, physician to the small-pox Hospital. "Believing that the lightest case of what has been termed varioloid, will produce small-pox in the unprotected, I must regard them as the same disease." Premising this explanation, Dr. B. informs us, that he has had under his personal notice 38 cases of small-pox subsequent to vaccination—some very violent and some exceedingly mild. What proportion of these would by other physicians have been called genuine small-pox, he is unable to say. Dr. B. remarks, that it would be difficult for him to determine whether vaccination had been *properly* performed in these cases. His information, showing that they had been vaccinated, was drawn from the patients, their friends, the cicatrix, and in one instance, the vaccinator, a gentleman to be relied on: where the cicatrix was wanting, the case was not considered as a vaccinated one.

Dr. B. states, that he has known no death from modified small-pox, and believes no such death has occurred: but has lost four patients with small-pox, taken after vaccination, viz. 1. Lewis Jackson, (coloured,) who was vaccinated in Boston 10 years ago, and was doing well until attacked by diarrhœa, which carried him off after being 17 days in the hospital. 2. Catharine Brown, (coloured,) vaccinated 8 years; doing well until an abortion with considerable uterine hæmorrhage took place, after which she grew worse and died, being 14 days in the hospital. 3. John Morris, (coloured,) and 4. Geo. Epply, (white man,) the former vaccinated 7, and the latter 14 years previously, were the other individuals. John Morris was 3 days, and George Epply 4 days in the hospital.

Dr. Brinckle further informs us, that he has had 14 cases of secondary small-pox, of which 12 occurred after previous inoculation, and two after previous natural small-pox. Two of these 14 died, to wit, James Pritchard and Spencer Jackson.

Dr. B. although he admits that the facts which have come under his "personal notice have tended in no small degree" to weaken his confidence in the "efficacy of vaccination as a preservative against the fatal effects of small-pox," yet would not have it inferred, that he is "prepared to abandon vaccination, or that its efficacy as a preservative against the fatal effects of small-pox is considered by me, (Dr. B.) as inferior to inoculation." "Most unequivocally do I avow my conviction, that vaccination is still to be preferred to inoculation." The result of his experience establishes him in the belief that "when the disease occurs in the vaccinated it is usually lighter than when it takes place in the inoculated."

In a second note he says, "I wish it to be distinctly understood, that until the occurrence of the present epidemic, I never *met with* a case of small-pox, (neither genuine nor modified,) subsequent to vaccination or variolation, although I had seen many of the vaccinated, and some of the variolated exposed to it. On hearing of cases of variola occurring after vaccina, I was therefore led to believe that the vaccination could not have been *properly* performed. But when personal observation convinced me that individuals who bore 'prima facie' evidence of having been *properly* variolated, could again have small-pox, the conviction was irresistible, that the same thing could *occasionally* happen after vaccination. Impressed with this belief, my confidence in vaccination is in one sense, and only in one sense, weakened. But my confidence in the prophylactic power of inoculation, as well as of natural variolation, has diminished in an equal, if not in a greater degree.

"Decidedly favourable, then, as I am to vaccination, I should really do injustice to the discovery of the immortal Jenner, were I to contend that a properly vaccinated individual could not under any circumstance be subsequently attacked by small-pox.

"To conclude—the result of my present conviction is, that when small-pox does not prevail with *unusual malignity* vaccination is a complete safeguard to the constitution. But when small-pox does prevail with *unusual malignity*, vaccination, to say the least of it, is still quite as effectual a preservative against the fatal effects of small-pox as variolation, whether naturally or artificially induced."

The following additional note will explain itself.

"*March* 8, 1828.

"GENTLEMEN,

"I understand a report is in circulation, that Dr. Physick's confidence in vaccination has for the last ten years been gradually diminishing. Knowing the report to be without foundation, I unhesitatingly assume the responsibility of stating most explicitly,

"1. That Dr. Physick's confidence in vaccination has not been diminishing for the last ten years.

"2. That Dr. Physick has as much confidence in vaccination now as he ever had.

"3. That, as an evidence of Dr. Physick's *confidence* in vaccination, he still continues to recommend it.

"I have the honour to be, Gentlemen,
"Very respectfully,
"Your obedient servant,
"W. D. BRINCKLE."

"Drs. Meigs, Coxe, and Condie,
"Committee from Medical Society."

Dr. **Henry Bond**, in five years last past, has had two cases of small-pox after reputed vaccination. One of these was a boy eight years old, vaccinated four years before by a physician who had no record or remembrance of the fact; his arms had no cicatrix, and his friends were of the very lowest class. This patient died when the secondary fever supervened, of what appeared to be genuine small-pox. The second case described by Dr. Bond, from the early fall of the crusts, &c. seems to have been very much modified. His patient recovered. The committee consider these cases as not at all inconsistent with the assertions of Dr. B. that he has seen no case where there was danger of death or deformity in an individual who had been undoubtedly vaccinated. He states that he could cite numerous cases in proof of the protective efficacy of vaccination, but deems it unnecessary to do so.

Dr. **John Barnes** relates his experience as having been derived from the occurrence of small-pox and varioloid disease, to the amount of between two and three hundred cases, and replies to the whole of our queries—*None*.

Dr. **John Bell** has seen cases of eruptive disease, resembling small-pox in all essential particulars after vaccination; the evidence of this operation being derived from the scar, or the information of parents or friends: but he has seen no instance of death from the abovementioned cases. He has had no case of secondary small-pox during the present visitation. He refers to the four examples of this sort, of which a history has already been given in Mitchell and Bell's account of the small-pox of 1823-4. See the North Am. Med. and Surg. Journal, Nos. 1 and 2.

Although, of a given number of cases of small-pox after vaccination, he has seen more violent attacks this season than in the former epidemic: yet, on a review of the whole evidence, not inconsiderable, he can confidently assert that no facts have come under his personal notice, tending, in any degree, to weaken his confidence in the *efficacy* of vaccination as a preservative against the *fatal effects* of small-pox. Wherever the danger, (with one exception,) has been imminent, he has had good reasons to doubt if the vaccination was properly performed. In these doubtful cases, (which have all recovered,) the symptoms were such as in unequivocal small-pox would have augured a fatal termination.

Dr. **Franklin Bache** has seen no case of genuine small-pox occurring after vaccination or precedent variola, nor death from modified small-pox. To the sixth query he replies negatively.

John R. Coxe, M. D. Professor of Materia Medica in the University of Pennsylvania.—We have been favoured by this gentleman with a most interesting communication, in which we find abundance of both facts and arguments, to corroborate the testimony which he has precedently given on the subject of vaccination. Dr. Coxe may be regarded as the founder of vaccination in Pennsylvania.

"Twenty-six years," says he, "have just elapsed, since I first succeeded in introducing the vaccine disease into Philadelphia: a new generation has within that period sprung up, who owe their safety from the small-pox to the former disease. If we suppose the population of Philadelphia to amount only to 120,000, we shall probably not err in stating the vaccinated portion at one-half; we have had, in the period named, the small-pox several times amongst us; but, although the inoculation for that disease has been long suspended, except as a test after the vaccine, we have never seen it spread amongst that immense number who have been vaccinated! Is it possible to imagine that one-half of a city, like Philadelphia, could have so entirely escaped the ravages of an epidemic, if they had not securely opposed the egis of Jenner to that loathsome and dangerous disease? Where are the numerous vestiges, *now*, of its frightful ravages. It is now as *rare* to see a person disfigured from the small-pox, as it was *common* formerly." . . . . "It will, I think, be found, that the description of varioloid is very similar to that of many of the cases of small-pox as laid down by the old writers on the subject; and more particularly of some of those anomalous ones, which were apparent in almost every epidemic described. It is well to remember, that few physicians now living have ever witnessed such an epidemic; and our knowledge must be derived from a close comparison of our so called cases of varioloid with the accounts handed down to us by those who have witnessed small-pox in every shape and feature. Let such a comparison be strictly instituted between the accounts left us by Sydenham, Morton, and writers even preceding them, and those of varioloid and modified small-pox of the present period, and a strong analogy will be found to exist between them."

We will cite further, from professor Coxe's communication, the following:—

"There is perhaps no individual in the United States, probably in the world, who has a more undoubted right to question the assertions made against vaccination than one of the members of your committee. Himself, one of the earliest of those subjected to its influence, now upwards of 26 years of age, (he was,) immediately afterwards submitted to every possible means of variolous infection. Inoculated during a successive series of years, probably, at least fifty times by myself, and subsequently repeated by his own hands; he was likewise exposed for a considerable time, and held in the arms of an individual in the most malignant state of small-pox, not more than ten weeks after the termination of the vaccine.

"This, together with numerous other trials on the subject made with every possible care and precaution, many of which are detailed in my treatise on vaccination, published in 1802, fully satisfied my mind that the vaccine was entitled to every praise, as a preservative against small-pox, which had been ascribed to it by the illustrious Jenner." He proceeds to state that he has no reason to believe that any case that has thus come under his care has been affected subsequently with what is termed the varioloid. The committee regret that they cannot include the whole of this very interesting communication in their report. They hope it will be given to the public in a separate form.

Dr. D. **Theodore Coxe** has seen no genuine small-pox after vaccination, nor death from modified small-pox—has seen three cases of variola subsequent to inoculated variola. One, (an old black,) died. He does not feel assured that this man had ever been truly affected with the disease. His confidence in the protective efficacy of vaccine is complete.

Dr. **Comstock** reports that no facts have come under his notice which diminish his confidence in regard to vaccination.

Dr. D. **Francis Condie**, physician to out-door poor for the western district of Southwark, has seen a majority of the patients who have been sent from his district to the hospital, in addition to those occurring to him as physician to out-door poor, and in his private practice. Views the disease in the unprotected as genuine variola. States that such cases in 1823–4 very generally terminated fatally; but during the recent prevalence, such have for the major part recovered.

In the same neighbourhood and families with the above, many vaccinated and inoculated persons were affected with a modified disease, in which the eruption appeared sooner, was attended with less inflammation and milder constitutional symptoms: the course was completed in from five to ten days, giving evidence of no fetor, secondary fever or cicatrices.

In vaccinated persons this affection required little remedial treatment, and where Dr. C. had vaccinated the individuals himself, and was satisfied with its genuineness, their attacks were invariably mild, with few eruptions on the face, breast, and arms.

Cases of modified disease, subsequent to small-pox inoculated or natural, were more violent as to eruptions, inflammation, constitutional disturbance, and duration.

Dr. Condie has lost only one patient affected with secondary small-pox. The man was 35 æt. and bore in his face the marks of the antecedent attack, which had been sustained in his youth.

As to the protection derived from small-pox, the doctor thinks his personal experience warrants him in believing, that if not more liable to the disease a second time, those who have had it once are in "case of a re-attack certainly less fully protected from a fatal result than those who have undergone vaccination."

On the question of identity of the poison which produces variola and its modifications, he cites in proof of it the following cases. Mrs. Pritchett, a vaccinated person, severely attacked with the modified form on the 15th October, 1817—she was well in ten days. On the 19th idem, her daughter, 3 or 4 æt. and unvaccinated, was seized with small-pox, and on the 14th day died. A sister of Mrs. P. æt. 16, vaccinated, was also seized on the 19th, with the modified form. On the 1st of November, Mr. P. the husband, æt. 35, pitted with previous small-pox, was taken sick, and died on the 16th day. A few days after, Mr. P.'s son, æt. 10, unprotected, was attacked by natural small-pox, and died on the 10th day of the eruption. Dr. Condie's communication contains several other examples of similar scope and tendency. Our report will not admit of the details.

His own practice affords also very decisive proofs that the vaccine impression does not wear out or lose its protective efficacy by lapse of time, as he has seen the disease equally violent and equally mild at every period after vaccination, from a few days to twenty years.

Finally, he "conscientiously and deliberately" asserts that he knows no circumstance calculated to weaken his faith in the preservative efficacy of genuine vaccination against the fatal effects of small-pox.

Dr. E. **Jenner Coxe** has seen no case of genuine small-pox subsequent to vaccination or variolation, nor any death from modified small-pox. He regards vaccination as capable, when successful, "of imparting to the system a certain power capable of resisting an attack of *genuine* small-pox, or rendering a recovery from modified small-pox or varioloid absolutely certain."

Dr. B. H. **Coates** reports no unmodified cases after vaccination, but has seen numerous modified cases of various severity, yet none of them fatal. Has seen no case of any sort after variola. Experience has greatly confirmed his impressions as to the propriety of vaccination as a preventive of small-pox; all the cases he has witnessed being incomparably milder than mere variola.

W. P. Dewees, M. D. adjunct professor of midwifery in the University of Pennsylvania, has seen no genuine small-pox after vaccination, no death from modified small-pox, nor variola subsequent to inoculated small-pox. "Nor," continues the professor, "any thing tending in any degree to weaken my confidence in the efficacy of vaccination as a preservative against the fatal effects of small-pox."

Dr. W. B. **Duffield** has had many cases of small-pox after vaccination, all very mild, except one which was a very bad case, but recovered. The above had been all properly vaccinated. Has seen no death from "meliorated small-pox." Never knew a person to have small-pox twice. As regards the sixth question, "I say I have confidence in vaccination, though not of the same kind I had when it was first introduced, because I then believed that all who were properly vaccinated would be forever and entirely preserved from small-pox; this, however, I find not to be the case. I am nevertheless an advocate for vaccination."

Dr. S. **Emlen**, one of the physicians to the Pennsylvania Hospital, has seen no genuine small-pox after vaccination, during the recent occurrence of small-pox here. All his modified cases exceedingly mild, neither has he seen any secondary small-pox. Dr. E. never knew a fatal termination of varioloid; which, in those patients he had himself vaccinated, has been attended with indisposition as slight as accompanies the most trifling forms of eruptive disease. Says he should in fact have called them varicella, had not the source of the contagion been manifestly small-pox; in some instances the natural small-pox having been present in the house. The disease in children so circumstanced has exhibited great variety, from a simple rash up to the mildest form of variola.

Dr. **Benjamin Ellis** states that he has seen only one case of genuine small-pox after vaccination; the only evidence of the operation being derived from the girl herself, a negro—she recovered. No death from modified small-pox. A case of small-pox proved fatal in a boy in the year 1823; his mother said he had been regularly inoculated in Ireland. The eruption was confluent. Instead of any circumstances to weaken his confidence in vaccination, he has observed many that confirm his previous opinion of its superiority over every other preservative, and of its absolute power to modify and disarm small-pox of its fatal character.

Dr. S. M. **Fox** has seen cases of small-pox after vaccination, but very generally mild and modified; he felt satisfied from testimony, and the comparative mildness of the disease, that vaccination had been properly performed. This gentleman says, "one case of death has occurred under my personal notice from small-pox after vaccination: this was a case of confluent small-pox, the eruption flat, depressed, and of a very bad appearance, slight fetor was observed for a day; great soreness of the throat, difficulty of breathing and of deglutition, with stupor, were the symptoms of the latter period. This case terminated fatally on the 11th day. The patient had been vaccinated in childhood by a late physician of great eminence." Has seen no case subsequent to variola, but had seven patients of this class in 1823–4: "were said to have been inoculated:" one died: he had no scar from inoculation, but he and his friends were positive as to his inoculation. Dr. Fox thought it very doubtful. States that he considers vaccination as the best preservative we are possessed of against the fatal effects of small-pox.

Dr. L. P. **Gebhard** had a case of confluent small-pox in a female adult: had been vaccinated twenty years—but in consequence of the eruption, could discern no scar. She had no unpleasant odour nor pits—recovered. Is not sure as to her having been properly vaccinated, but thinks the case was somewhat modified. His confidence in vaccination remains undiminished.

Dr. **Richard Harlan**, one of the surgeons of the Philadelphia Alms-House, reports two cases of varioloid disease: one in a female, who insisted that she had sustained natural small-pox in infancy; it was severe, but not fatal. The second, (mild,) in a gentleman who had been undoubtedly inoculated. His cases of varioloid, after reputed vaccination, have all recovered. Never had varioloid in a patient vaccinated by himself. Has of late years experienced great difficulty in procuring successful results from the use of vaccine matter, although carefully selected. After failing eight or ten times, (with the crust,) has never failed in the first attempt with fresh lymph taken about the 8th day. Has seen no case of varioloid after vaccination, within 12 years of the vaccination. States his confidence in genuine vaccination as undiminished, but thinks the virus ought to be renovated by taking it again from the cow.

Dr. **Thomas T. Hewson**, one of the surgeons to the Pennsylvania Hospital, being charged with investigations on the subject of variola, &c. by another institution, (the College of Physicians,) only answers to the last query, that his confidence in the protective powers of vaccination remains undiminished.

Dr. R. M. **Huston** has seen no genuine small-pox after vaccination, nor death from modified small-pox. Two cases of small-pox after variola—none dead. His confidence in the vaccine protection confirmed.

Dr. W. S. **Helmuth**, vaccine physician for Moyamensing, has seen no genuine small-pox subsequent to vaccination. No death from modified small-pox. One case of genuine variola, after natural small-pox—the patient recovered. His confidence in vaccination confirmed by daily observation.

Dr. H. L. **Hodge**, one of the physicians to the Philadelphia Alms-House, has seen one case of "apparently genuine" small-pox after vaccination; the patient had a cicatrix from vaccination, but not well characterized. He has seen no fatal case of modified variola, no secondary small-pox, and notices the protective power of the Jennerian method, in rendering mild and gentle a disease which is destroying "one-half of its unprotected subjects." He considers vaccination as "far preferable" to inoculation under the most favourable circumstances.

Dr. W. E. **Horner** reports three instances of small-pox occurring after vaccination. The vaccination probably perfect, as Dr. H. cites a physician of great repute as the vaccinator in two, and in the third case there was a cicatrix. Has seen no fatal case of small-pox, and consequently, his confidence in the efficacy of vaccination, as a preservative from the fatal effects of small-pox, is not shaken by his private experience.

Dr. **Isaac Heylin**, early acquainted with the preservative powers of vaccination, having frequently subjected his patients to the test of inoculation, without in any case producing variola. He considers an effectual vaccination as equal in efficacy to inoculation or natural small-pox.

Dr. **Thomas C. James**, professor of midwifery in the University of Pennsylvania, has seen a few cases of mild small-pox after vaccination. The eruption ran through its stages more rapidly than in genuine variola: there was no peculiar odour and no secondary fever. In the cases above alluded to, he says, that vaccination was performed either by himself or by friends, in whom he places confidence; and that it was strictly satisfactory at the time. Has seen no death from modified small-pox: no case of small-pox after previous inoculated or natural small-pox. And finally, no case has come under his personal notice to weaken his confidence in the efficacy of vaccination as a preservative against the fatal effects of small-pox.

Dr. **Harvey Klapp**, vaccine physician for Southwark, saw a fatal case of small-pox subsequent to vaccination; the operation having been performed fifteen years before, as it was said. He also saw a fatal case of secondary small-pox, in which the patient died on the sixth day of the eruption. Has had another case after previous natural small-pox, but the person recovered. Says he has seen more cases of modified small-pox after vaccination, than after inoculation, owing to the greater number of vaccinated persons. The disease has occurred indifferently from three months to twenty years after the insertion of the vaccine virus. Remarks that he has seen only one case tending to weaken his confidence, and that one doubtful.

Dr. **John K. Mitchell**, one of the physicians to the Pennsylvania Hospital, refers us to Mitchell and Bell's paper, in the first and second numbers of the North American Medical and Surgical Journal, for an exposition of his opinions and the facts on which they are founded, and avers that his confidence in "vaccination has been confirmed by his subsequent experience." He prefers vaccination to inoculation, under all circumstances.

Dr. George Mifflin has seen no small-pox after vaccination; from modified small-pox no death, nor small-pox after variola. His confidence remains unshaken.

Dr. Charles Mifflin reports that no genuine small-pox, after vaccination or variola, has come under his personal notice; nor any case of fatal modified small-pox. No facts have come under his personal notice to weaken his confidence in the efficacy of vaccination, as a preservative against the fatal effects of small-pox.

Dr. Thomas D. Mitchell, of Frankford, notices the modified small-pox as it occurred at Frankford, in this vicinity, and refers to his essay published in the Medical Recorder, for 1822. His opinion as to the preservative efficacy of vaccination has not been in the least changed.

Dr. John Wilson Moore has seen a number of cases of small-pox subsequent to vaccination; some of a confluent character; in a few instances he could not discern that vaccination had exerted much, if any influence. Supposes generally that they had been well vaccinated. Three cases were mortal. One was a male, æt. 19, vaccinated when a lad, first seen on the 6th day of eruption, and he died on the third or fourth, of desiccation. This one occurred in 1824. In 1828, attended a female, æt. 18, who had been vaccinated when a child in the Pennsylvania Hospital, and, (so said the parents,) in a satisfactory manner. She had a cold when she was taken sick with the varioloid, and when the doctor saw her on the third day of the eruption, "she was labouring under a state of *pneumonia typhodes.*" She died two days afterwards, which was the fifth of the eruption. The last was in a coloured woman, æt. 22, vaccinated *in the country when a child.* Dr. M. saw her on the sixth or seventh day of the eruption; pock turned on the ninth, when she appeared to be doing well. Fever ensued, with delirium, and she died on the sixteenth day.

The same gentleman reports two cases of small-pox after inoculated variola, but no deaths under that head. His confidence is weakened—he early viewed it as an entire preventive of small-pox infection. He states that he knows of no death where there has been "professional assurance of satisfactory vaccination."

Dr. Henry Neill has seen one case of genuine small-pox after vaccination. No death from modified small-pox. Two cases of modified small-pox after precedent inoculated variola. Dr. N. informs us that having seen genuine small-pox after vaccination, and very alarming modified variola after inoculated small-pox, he supposes neither vaccination nor inoculation are *infallible preventives* of the fatal effects of our disease.

Dr. John C. Otto, one of the physicians to the Pennsylvania Hospital, has seen many cases of what is usually termed varioloid, which he regards as small-pox "mitigated by successful vaccination." The disease, though very generally mild, short, and safe, was, in a few persons, of a more severe character; not distinguishable from a very high grade of natural or inoculated small-pox, excepting in its shorter duration. They had confluent eruption, salivation, sore throat, swelling of the fauces, blindness from tumefaction of the face, and strongly marked secondary fever. There was also permanent pitting, and in one instance bloody urine. In these cases there could be no doubt of an antecedent genuine vaccination. These examples furnish no instance of a fatal termination. Dr. Otto, since he has been in practice, has had at least five persons affected with small-pox, who said they had had it before; in all of them several years had elapsed since the inoculation, and they had in the interval been exposed to the infection without taking it. When they took it at last, they knew not the source of the contagion.

These cases only occurred in years when small-pox was unusually general and malignant.

All the cases were dangerous, and one female died. She communicated the disease to her five vaccinated children, three of whom had it confluent—they all recovered.

Dr. Otto is not induced, from all he has witnessed, to relax in his efforts to disseminate vaccination as widely as possible. He recommends it exclusively to the patronage of the public.

Dr. **Ph. Peltz**, Jr. No case of genuine small-pox after vaccination, nor fatal modified small-pox. A few cases of genuine variola after inoculation, and a fatal one after natural small-pox. His confidence strengthened.

Dr. J. **Rodman Paul** relates the history of natural and of modified small-pox cases occurring in the family of John Havenstrite, of Philadelphia, which was composed of ten individuals; viz. three inoculated, four vaccinated, and three unprotected. Of the latter, two were twins two months old, and one about two years of age.

The disease first attacked a boy of twelve years æt. who had been vaccinated when an infant. It was a severe but modified case; recovered. The mother of the twins refused to have them vaccinated; they took the disease, and both perished. The other child was subjected to the vaccine influence which went on in its regular course until the thirteenth day, when he had accession of fever, followed by four or five varioloid pustules, requiring no treatment—he recovered.

The three vaccinated members of the family also had varioloid eruptions of a mild character. The mother who was inoculated suckled her twins; she had fever but no eruption for some days, when her nipples became sore, and a number of varioloid pustules appeared on the breast only. The other two inoculated persons escaped.

Dr. **Joseph Parrish**, one of the surgeons to the Pennsylvania Hospital, has seen two cases of small-pox after reputed vaccination, and both proved fatal. One of these cases is reported above by Dr. Fox. Dr. Parrish is unable to give any clear opinion as to the genuineness of the vaccination in the other case. Does not recollect ever having seen a fatal case of modified small-pox or rather varioloid. Has seen three cases of secondary small-pox, two of which were fatal. Two had been inoculated, and one had suffered natural small-pox. "My confidence," says he, "in vaccination as a preservative against the fatal effects of small-pox still continues firm—the few exceptions do not impair in my mind the efficacy of the general rule, and the same exceptions apply to inoculated and even natural small-pox. Hence as vaccination is entirely free from all risk of life, and from the power of communicating a fatal disease to others, I consider its superiority in every respect most decided."

Dr. **John Ruan** has seen no case of mortality from modified small-pox, and states his confidence in the prophylactic powers of vaccination, to be not in any degree weakened by his past experience.

Dr. J. C. **Rousseau** has seen no case of varioloid in any individual vaccinated by himself. No death from modified small-pox: has seen violent cases of secondary small-pox, but none mortal. His confidence is firmer than ever.

Dr. **Thomas Shivers**. No genuine variola subsequent to vaccination, but has had three cases in persons previously inoculated, one of whom died. Regards vaccination as the only secure prophylactic. As instances of the malignant nature of the prevailing small-pox, we will cite from Dr. S.'s letter to the committee, the following: "Of seven cases that I have had this season of natural small-pox in subjects who had neither been vaccinated or inoculated, *all have died;*" while of about forty cases in persons vaccinated, not one has perished.

Dr. W. **Shaw** informs the committee that he has seen no genuine small-pox after successful vaccination. Has vaccinated several thousands since the year 1802, and has heard of no instance of small-pox occurring in one of these subjects. No death from modified variola. Of two instances of small-pox occurring after inoculated variola neither proved fatal. His early experiments with genuine variolus matter, as a test for vaccination, established his conviction of its efficacy, and he still has the fullest faith in it.

Dr. Samuel Tucker. No case of genuine small-pox subsequent to vaccination, nor death from modified small-pox, or case of secondary small-pox has fallen under the notice of this gentleman, who informs us that nothing has occurred in his experience to weaken his confidence in the vaccine protection.

Dr. G. B. Wood. Out of twenty cases of varioloid after vaccination, *one* presented all the symptoms of genuine variola, with the exception that none of the peculiar odour was discernible. This patient had the scar, and said she was vaccinated when a child—recovered. No death from modified small-pox. Of three persons precedently inoculated, two had varioloid, and one genuine variola: the man, æt. thirty-five, and intemperate, died. Has seen in his own practice nothing that could justify an opinion that vaccination is not an effectual preservative against the fatal effects of small-pox.

Dr. John Wiltbank. J. P. a coloured man, æt. twenty-five, had pain in the head, breast, and side, dyspnœa, high vascular excitement, and all the symptoms of pleurisy. On his arm was a fine vaccine vesicle nine days old. This man was vaccinated on the Monday, seen on the Tuesday week following, when he was bled, blistered, and used diaphoretics. On that day a copious eruption of variola presented itself, which proved confluent, and he died on the fifth day. Dr. W. adds that the above case is the only one that he has seen, to diminish confidence in the protective efficacy of the vaccine disease.

Dr. Thomas H. Yardly, answering negatively to our queries, concludes with assurance of his reliance on vaccination as a protection against small-pox.

From the above condensed view of the testimony furnished to us by a very great number of highly respectable practitioners, the committee were tempted to trespass no further on your time by presenting additional observations, being persuaded that no candid mind could remain in doubt, either as to the value of vaccination as a prophylactic in the case under consideration, or as to the sentiments of the medical profession in this city towards it; but, although not one dissentient voice has been raised, it is deemed proper to make a few further remarks. And

1. These documents show that varioloid disease has attacked both variolated and vaccinated persons.

2. Of the whole number of variolated cases, say seven hundred and sixty-five, far the largest proportion occurred in vaccinated persons, a circumstance which, as a naked proposition, might tend to exalt the public confidence in inoculation at the expense of vaccination. Now, although we are unable to ascertain with any pretensions to preciseness the just allotment of the two orders of cases, enough has been said, to indicate that the susceptibility to *varioloid* is not very greatly different under both sorts of protection. It is highly probable that at least eighty thousand vaccinated persons reside in this city; while there are not more than twenty thousand, and probably even a smaller number of variolated persons; hence, on the supposition of an exactly equal susceptility, we ought to find four cases of varioloid after vaccine, to one case of the same affection subsequent to variola.

In the documents, ten deaths are reported as having occurred from small-pox subsequent to vaccination, while nine are cited as proofs of the failure of variola to protect the constitution. Let us examine a little the circumstances of the ten fatal cases, and we shall see if they can be fairly cited. For example, out of the four reported from the personal observation of Dr. Brinckle, one, Catherine Brown, was doing well until an abortion with uterine hæmorrhage took place, after which she changed for the worse and finally lost her life.

The cases of Epply and Morris, which were under treatment four and five days respectively, are liable to be questioned. No positive record is given of their having been vaccinated: the only assurance is derived from their own assertions. Even the case of Spencer Jackson, who died in the hospital seventeen days after his admission, is obnoxious to the same doubts, in consequence of its protracted duration. And it is easier to believe that all these individuals had undergone a spurious form of vaccine than that vaccine should have failed to protect them.

Dr. Bond's case is considered by him as extremely questionable. Dr. Fox's case may be admitted as an example of death from small-pox subsequent to vaccination. The known character of the eminent and conscientiously cautious individual who had vaccinated the unfortunate gentleman, forbids us to doubt that he considered his vaccination perfectly satisfactory, or that he could be mistaken in its character.

Dr. Klapp's case is stated by him to be doubtful. Of Dr. Moore's fatal cases only two occurred in 1827–8. The woman when taken sick was suffering under a cold, and was labouring under an attack of pneumonia typhodes when the Dr. saw her on the third day of the eruption: she died on the fifth day. The second woman died on the sixteenth day, of a secondary fever, which came on after the pock turned.

There will be no reason to charge the committee with want of candour if they reject both these examples of death from small-pox after reputed vaccination. The pneumonia typhodes has no necessary connexion with variola, and the woman's death ought rather to be charged on that terrific complication, than on an implied impotency of the vaccine. The second case from its long duration and other phenomena seems to have been an unmodified small-pox. No fatal case of modified small-pox has been adduced. In neither case is there furnished an authentic record of the vaccination—which ought therefore to be deemed hypothetical. Lastly, Dr. Wiltbank's case, occurring before the constitution had been modified by the maturity of the vaccine vesicle, proves nothing against its value and efficacy.

Thus we may, without the least want of candour, come to the conclusion that only one death from small-pox after vaccination has occurred in Philadelphia during the year 1827, among eighty thousand vaccinated persons and during the prevalence of a most malignant and mortal small-pox, while several individuals have lost their lives from small-pox after they had already gone once through the disease. It appears then clearly that vaccination ought to lose nothing of the public confidence; and, as a protection from the fatal effects of genuine small-pox, it may safely be asserted that it is in every sense to be preferred to inoculation.

Let the public be well informed with regard to the real degree of efficacy of the vaccine virus—let them be no longer told, it will positively shield them from the assault of small-pox in any shape and every instance. They will confide in it if we point them to the physicians who rely on it for the safety of their wives and children, and defended by "the egis of Jenner," walk unharmed themselves amidst the arrows of pestilence and death.

EDWARD JENNER COXE,
D. FRANCIS CONDIE,
CH. D. MEIGS.

The committee have received several communications, in reply to their queries, since the above report was finished; and they regret that the lateness of the period at which they arrived prevented their incorporation into the body of the report. The writers are Dr. W. Carll Brewster; Dr. J. Green; Dr. Joseph Hartshorne; Dr. B. S. Janney; Dr. Joseph G. Nancrede, vaccine physician for the city; Dr. O. H. Taylor; Dr. H. Walton; and Dr. J. Uhler, Jr.

We can only briefly state that they support by their communications the whole mass of the evidence given above. Their experience, (in some very considerable,) has not, in the least degree, tended to destroy their confidence in vaccination; whose preservative efficacy has been found sufficient, by a part of these gentlemen, to defend them from the contagion of small-pox, though repeatedly exposed to it in their professional intercourse with the sick. Their letters are submitted, with the rest of the documents, to the disposal of the society.

THE
AMERICAN JOURNAL
OF THE
MEDICAL SCIENCES.

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TO READERS AND CORRESPONDENTS.

Communications have been received from Professor Dickson, of Charleston, Dr. Hale, of Boston, Dr. Drake, of New York, Dr. Wright, of Baltimore, Dr. Stedman, of St. Croix, and Dr. Callagan, of Pittsburg.

We are indebted to correspondents at Pensacola, Harrisonburg, Va. and Bridgewater, N. J. for interesting cases, but which do not present sufficient novelty for publication.

We ought to have acknowleged in our last number the receipt of a communication on the use of topical cold in fever. We shall be pleased to receive any observations on the subject under the proper signature of the writer, but no anonymous communication can be inserted.

We have received the following publications:—

Journal der Chirurgie und Augen-Heilkunde, herausgegeben, von C. F. v. Graefe und Ph. v. Walther. Elfter Band. Erstes Heft. Berlin, 1828, (in exchange.)

Litterarische Annalen der gesammten Heilkunde, herausgegeben, von Dr. J. F. C. Hecker. January 1827, to January 1828, inclusive, thirteen numbers, (in exchange.)

Biblothek der practischen Heilkunde, herausgegeben, von C. W. Hufeland und E. Osann, for 1827. Berlin, (in exchange.)

Annales de la Médecine Physiologique, for January, February, and March, 1828, (in exchange.)

Journal des Progrès des Sciences, et Institutiones Médicales, en Europe, en Amerique, &c. Vol. VIII. (in exchange.)

Revue Encyclopédique, January, February, March, 1828, (in exchange.)

The Edinburgh Medical and Surgical Journal, for April, 1828, (in exchange.)

The London Medical and Physical Journal, for March, April, May, and June, 1828, (in exchange.)

The London Medical Gazette, Vol. I. Nos. 5 to 15, inclusive, (in exchange.)

The London Medical Repository and Review for March, April, May, and June, 1828, (in exchange.)

The Medico-Chirurgical Review for April, 1828, (in exchange.)

The Glasgow Medical Journal. Edited by William Mackenzie, Andersonian Professor of Anatomy and Surgery, and Surgeon to the Glasgow Eye Infirmary, No. I, for February, 1828, (in exchange.)

The Boston Medical and Surgical Journal, Vol. I. Nos. 10 to 22, inclusive, (in exchange.)

The North American Medical and Surgical Journal for July, 1828, (in exchange.)

The Western Journal of the Medical and Physical Sciences. Edited by Daniel Drake, M. D. for May and June, 1828, (in exchange.)

The Western Medical and Physical Journal for February, March, and April, 1828, (in exchange.)

TO READERS AND CORRESPONDENTS.

The following from Professor **Osann**:—

De Carbunculo Polonico. Auctore A. T. **Helbich.** Berlin, 1827.

De Alcaloideis. Auctore **Eduardus Henricus Hartung.** Berlin, 1827.

De Allantotoxico. Auctore **Joannes Davides Davidson.** Berlin, 1827.

Experimenta Aliqua de Acidi Adiposi Effectibus in Animalia. Auctore L. T. **Sebauer.** Berlin, 1827.

De Fungis Venenatis. Auctore **Mauritius Ascherson.** Berlin, 1827.

Animadversiones Nonnullæ in Normas Crancoscopieas, Camperianam Imprimis et Duverianum. Auctore **Philippus Phœbus.** Berlin, 1827.

Dissertatio Medica de Dignitate Medicaminibus Nonnullis Restituenda. Auctore F. G. G. **Kanichfeld.** Berlin, 1827.

De Intestines se intus suscipientibus. Auctore **Christophorus Mehlhose.** Berlin, 1827.

De Foraminis Ovalis et Ductus Arteriosi Mutationibus. Auctore G. E. **Biel.** Berlin, 1827.

De Monopodibus. Auctore **Hermannus Julius Behn.**

De Linguæ Papillus Earumque Involucro tam Sano quam Aegrotante. Auctore **Joannes Ernestus Gabler.**

De Janis. Auctore C. J. T. **Zeschokke.**

Uebersicht der Wichtigsten Heilquellen in Königreich Preussen, von Dr. E. **Osann**, Professor der Medicin zu Berlin. Berlin, 1827, (from the author.)

Transactions of the Association of Fellows and Licentiates of the King and Queen's College of Physicians in Ireland, Vol. V. Dublin, 1828.

Essay on Expansibility as a Vital Property, and on the Influence of the Capillary Tissue over the Circulation of the Blood. By **Hugh L. Hodge**, M. D. Lecturer on the Principles of Surgery in the Philadelphia Medical Institute; one of the Clinical Lecturers in the Alms-house Infirmary, &c. Philadelphia, 1828, (from the author.)

For the gratification of our contributors, we continue the references to the works, in which they will find notices of their communications.

Professor **Mott** will find a highly complimentary notice of his case of Ligature of the Common Iliac in the Medico-Chirurgical Review for April, 1828, also in the London Medical and Physical Journal for May, 1828—of his case of Calculous Degeneration of the Scrotum in the Annales de la Médecine Physiologique for March, 1828.

Professor **Chapman**'s paper on Diabetes is noticed in the Annales de la Médecine Physiologique, March, 1828,—his Anomalous Cases of Dropsy, and his Observations on the Influence of Mercury in the production of Hepatic Affections, are copied into the Western Medical and Physical Journal for May last—his Thoughts on Jaundice, and his notice of the Efficacy of Tobacco in Croup, in the London Medical and Physical Journal for June, 1828.

Professor **Dewees**'s paper on Bloody Infiltrations into the Labia Pudenda is reviewed in the Journal des Progrès, Vol. VIII. and his paper on the Secale Cornutum is copied into the Western Medical and Physical Journal for February, 1828.

Professor **Horner**'s Observations on the Mucous Membrane of the Stomach and Bowels is copied entire into the London Medical and Physical Journal for February, March, and April, 1828, and noticed in the Medico-Chirurgical Review for April, 1828.

Dr. **Jackson**'s Report of Cases treated in the Philadelphia Alms-house Infirmary is noticed in the London Medical and Physical Journal for May, 1828; his paper on the Laws of Irritation, and his Observations on Epilepsy are reviewed in the Annales de la Médecine Physiologique for March, 1828.

Dr. **Arnold**'s Case of Paruria Erratica has been noticed in the Medico-Chirurgical Review for April, 1828, the London Medical Repository and Review for April, 1828, and copied in the London Medical and Physical Journal for June, 1828.

Dr. **Washington**'s Case of Gun-shot Wound is republished in the London Medical and Physical Journal for June last.

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Dr. **Geddings**'s Observations on the Functions of the Lymphatics are complimentarily noticed in the Ann. de la Med. Phys. for March, 1828.

Dr. **Proudfoot**'s Case of Fistula in the Lumbar Region is republished in the London Medical and Physical Journal for May, 1828.

Dr. **Jackson**'s Communication on the Use of Mercurial Inhalations is noticed in the Western Medical and Physical Journal for May, 1828.

Dr. **Drake**'s Letter on the Respiration of Cool Air in Pulmonary Diseases is also noticed in the same Journal.

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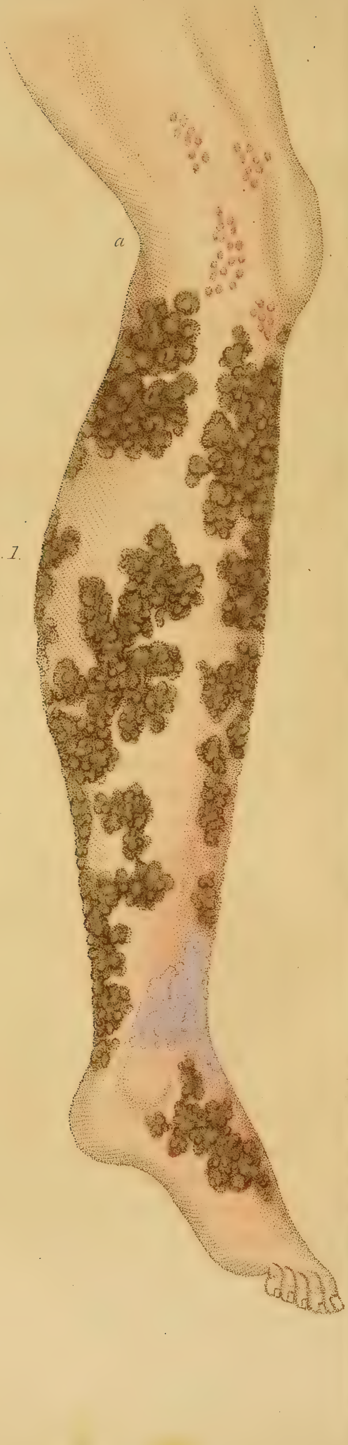

Fig. 1.

by J. Drayton.

THE
AMERICAN JOURNAL
OF THE
MEDICAL SCIENCES.

ART. I. *Cases of Ichthyosis.* By JOHN W. FRANCIS, M. D. Professor of Obstetrics and Forensic Medicine in Rutgers Medical College, New York, &c. [With a Plate.]

UNDER the denomination of *leprosy* the ancient writers comprehended almost every variety of cutaneous affections; and although some of the Greek physicians limited the term *lepra* to those disorders alone in which a scaly formation appeared, nosological discrimination was thereby little or not at all advanced. The leprosy of the Arabians would seem according to good authority to have embraced the elephantiasis of the Greeks; while, on the other hand, this disease has been transferred by various commentators on the writings of the Arabians, to the well known affection of certain hot climates, called the tumid or Barbadoes leg. Moreover, we have leprosies, white and black, and these again confounded with the enlarged leg, and fish-skin diseases; so that original authors and commentators have grouped together under one head the most distinct maladies, and contemplated as non-congeners, mere modifications of affections virtually one and the same. This want of accuracy in observation, and of precision in language, will be the more evident if we compare the descriptions of the physicians of the middle ages: the most opposite in their nature of the cutaneous disorders were by them confederated as leprosy: a disease of the exterior surface of the body, whether originating from local or constitutional causes; whether sporadic or endemial; whether it invaded the whole frame, or was limited to the smallest member thereof; whether it assumed a scaly or a pustular formation; of a snow, livid, copper, or other colour; of a contagious or non-contagious nature; if it proved obstinate to the usual means of relief was

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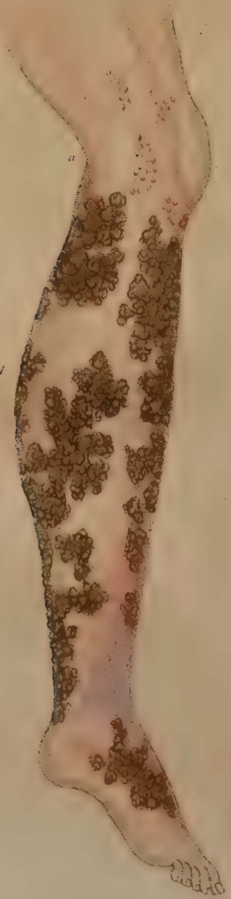
Fig. 1.



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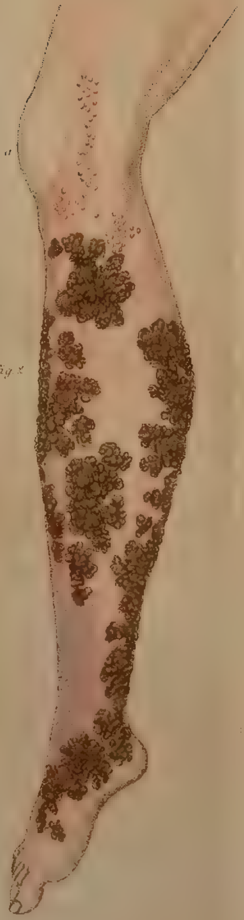

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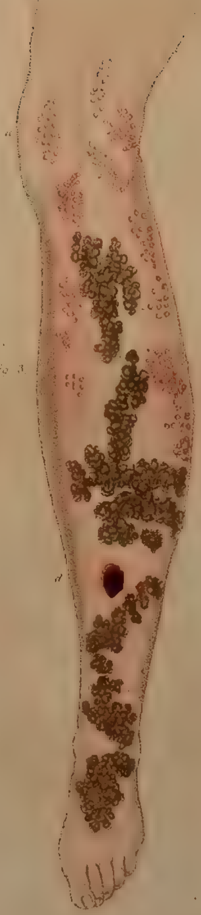

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MAUNDRELL, who had seen lepers in Palestine, gives us various particulars of the disease among them: their feet were enlarged like those of the elephant, or like horses feet swelled with the farey. When I was in the Holy Land, says he, I saw several that laboured under Gehazis distemper, particularly at Sichem, (now Naplosu,) there were no less than ten came begging to us at one time. "Their touch was held infectious; the distemper was quite different, adds he, from what I saw it in England. It not only defiles the whole surface of the body with a foul scurf, but also deforms the joints of the body, particularly those of the wrists and ancles, making them swell with a gouty scrofulous substance, very loathsome to look on."* PROSPER ALPINUS tells us it attacks peculiarly the feet. Some again assure us the disorder was marked by three peculiar signs; a bright spot, a rising of the surface, and a scale. The Salernian school not a little added to the obscurity on the subject: the same term was appropriated to different disorders, and elephantiasis sometimes designated a morbid state which had not been noticed even by the Greeks.

Even the poetry of LUCRETIUS,† and the speculations of MEAD,‡ may be read as confirmatory of many of these views.

Nor is this confounding together every species of cachectic disease, accompanied with a derangement of cutaneous surface, limited to the writers of the dark and middle ages. A similar obscurity and confusion pervade many of the descriptions of our latest and best authors. Notwithstanding the wide distinctions and pathological principles which ought ever to be kept in the foremost point of view as replete with sound practical precepts, the accounts of the different and multiplied species of derangement consequent upon primary and secondary syphilis; the depredations of its antidote, mercury, induced by the preposterous use of several of its pharmaceutical forms; the sivvins of Scotland and of Canada, the ichthyosis and the northern or Scandinavian leprosy, are each subjects upon which the ingenuous inquirer demands further investigation, and more precise reports, if he expects to arrive at a correct nomenclature.

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* Maundrell, Letter to Mr. Osborn, Clark's Bible, also Calmet.

† De Rerum Natura.

‡ Medicina Sacra.

When the imperfect state of the physical sciences in the early ages, and various other circumstances are considered, we are not entitled to wonder at the diversity of appellation that occurs in the history of similar and kindred diseases; and the confusion in which the specific distinctions of numerous disorders are involved. But this indulgence can scarcely be conceded to the eminent writers of our own day, who, while they have enriched medical philosophy with important facts, have nevertheless offered such discrepant and unsatisfactory information on these diseases, that not only the inherent difficulties of the inquiry remain unremoved, but much of the light we formerly enjoyed has become obscured. The systematic arrangements of Willan and Bateman are sufficiently well known, and while the exposition of the former on the subject of leprous diseases might be deemed among the most imperfect portions of his work, and be pronounced not only unsatisfactory, but as adding to our embarrassments; the ingenious and laboured researches of the latter have not relieved us so entirely as could have been desired.

The various ambiguous points relative to disorders of the skin seem little likely of being cleared up by the recent nosological classification of Professor Sprengel. According to this writer, the Greek leprosy and the Arabian or tubercular disease are only different species of the same genus: this latter is represented to occur under three different forms; the second of which is the Grecian or scaly, and under the last of these three, the tubercular, he enumerates *five* varieties, of which one is the Norwegian or northern leprosy.*

If the preceding remarks upon the conflicting views of different authors on leprous diseases so called, should be considered as in any degree harsh or censorious, a minute and elaborate study of the subject will satisfy the unprejudiced of their truth and application: and while it happens to comparatively but few medical prescribers to become practically conversant with these singular and loathsome complaints, yet a very limited experience will enable the close observer to arrive at conclusions equally at variance with the laboured classifications of some modern authorities, as with the unsuccessful efforts of their early predecessors.

The learned and classical investigations of Dr. Good† have led him to dispose of squamous affections under the genus *Lepidosis*, and to divide them into four species, the last of which is called by him the *L. ichthyasis*. Though the terminal *iasis* is by general consent applied to all the species appertaining to this genus of diseases, yet the word *ichthyosis* is preferred on this occasion as that which is most commonly used.

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* The Radesyge of Holst and others.

† Study of Medicine.

The characteristic of this genus, applies to those diseases which consist in an exfoliation of the cuticle in scales or crusts, and in some instances of almost a horny texture of the integuments: their outline is not regularly defined. Dr. Good considers them as owing to a morbid state or secretion of the rete mucosum or adipose layer of the part immediately beneath, which is sometimes too dry or deficient in quantity; sometimes, perhaps, absent altogether; sometimes, he adds, charged with a material that changes its natural colour; and sometimes loaded with an enormous abundance of a glutinous fluid; occasionally combined with calcareous earth. These lines of distinction are important to be kept in recollection in considering the pathological character of the elephantiasis of the Greeks; and for clinical purposes must not be overlooked.

In the *ichthyosis*, or fish-skin disease, the cutaneous excretories seem to throw forth such an excess of earthy material, that it sometimes encases the body, according to the language of Dr. Good, like a shell; and the cutis, rete mucosum, and the cuticle being equally impregnated with it, the order of the tegumental laminæ is destroyed, and the whole forms a common mass of bony or horny corium, generally scaly or imbricate, according as the calcareous earth is deposited with a larger or smaller portion of gluten, in many instances of enormous thickness; sometimes giving rise to sprouts or branches of a very grotesque appearance; thus offering numerous varieties.

The instances of the simple fish-skin disease are not so extremely rare; they may be seen in different climates, in individuals of different habits of body, and at different seasons; but cases such as those recorded by MACHIN, BAKER, ASH, MARTIN, HOME, and others,* may be cited as affording most singularly interesting pathological facts. It appears somewhat remarkable that Dr. BATEMAN, in noticing the characteristics of ichthyosis, should state that the disorder has only some tendency to scaliness, but without desquamation or the deciduous exfoliation. The Lepidosis ichthyosis is designated by Dr. YOUNG, as being marked with scales, harsh, dry, and almost horny.† But the peculiarities of the fish-skin disease, according to different authors, are almost innumerable. AVICENNA tells us the desquamation is accompanied with much itching; DOVER, a slender authority, but one who had some practical opportunities, states it is bounded by a red margin; and in the Transactions of the Leipsic Society, it is mentioned, that the patient is not only invested with scales, in the manner of fish, but that he emits the exhalations of that animal. Æger non solum squamis piscium instar tectus erat, sed etiam piscium odorem spargebat.*

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* Philosoph. Trans. of London; Willan, Alibert, Bateman, Medico-chirurg. Society of London. Lawrence, Lectures.

† Medical Literature.

The writer of these remarks has had various opportunities of witnessing several forms of those cutaneous disorders, which have been arranged under the denomination of *fish-skin* diseases. Like the tumid affections of the lower extremity they may be deemed of different kinds, and as deriving their origin frequently from different and even opposite causes. Hence the necessity of greater precision in the language employed in the description of them; and the inutility, if not impracticability, of grouping them together without full regard to specific differences. No one duly cautious would think of associating the case of puerperal sparganosis recorded by Mr. CHEVALIER, in the Transactions of the Medical and Chirurgical Society of London,† with the swelled leg described by Dr. HENDY, though both may be pronounced enlargements of the inferior extremity. Clinical discrimination will consider the former as one of the morbid terminations of phlegmasia dolens; and the latter as a complaint mostly endemial to certain of the West India Islands, so much so as to have obtained its appellation therefrom; and as possessing peculiarities at variance with the characteristics of the ancient or true elephantiasis. Moreover it becomes indispensable to an accurate knowledge of those disorders, that attention be paid to the divers sources of derangement of organic action, and consequent morbid structure. Details ought to be confined to concurring causes and essential symptoms, and the fact must not be overlooked, that many of the most popular writers have incautiously adopted in their accounts the too fanciful and poetical description of ARETÆUS, and in lieu of personal observation contented themselves with being copyers of the copyists of that eloquent author; or, like MEAD, VOGEL, FALCONER, LARREY, have incautiously confounded diseases of obviously different characters and natures.

It is not a little singular that one of the most happy descriptions of the leprosy, that has recently appeared, is that by a gentleman unconnected with the medical profession, a Mr. HUGGINS, an indigo-planter in the district of Tirrhoot. His account relates to that species of the complaint which is prevalent in India. The reader will be struck with the circumstances which marked the disorder, as given by Mr. H. and those published by Dr. ADAMS in his Morbid Poisons.

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* Sauvages, Nosolog. Method.

† Volume II.

It will readily be conceded that Dr. Good has materially lessened the obscurity in which the different species of ichthyosis have so long been involved; and by the attention which he has bestowed in the investigation of these rare disorders, augmented his claims to the gratitude of the medical philosopher. In the brief histories of the several cases of ichthyosis now given, little more is attempted than a faithful notice of the peculiarities in the causes and appearances of the disease in the different subjects of it. It is presumed they contain facts of sufficient value for future consideration.

CASE I.—S. J. the subject of this case, aged 54, was born in the city of New York. Both his parents were natives of this country. He had suffered full six years of the complaint at the time he consulted the writer, in January, 1824. Shortly before the first invasion of the disorder, he received a slight abrasion on the lower and anterior part of the right leg: this was followed by some pain, redness, and the discharge of a thin humour somewhat acrid, which within a reasonable period ceased, and the whole promised well. But after a while, he again felt local inconvenience; a thin humour reappeared, and a dry scurf was induced in several parts of the limb. On the other leg a like appearance was manifest soon after this time, and this was marked by the formation of small crusts which used to fall off and leave the surface inflamed. The parts about the ancles, in both legs, often swelled considerably; fresh incrustations formed, and the disorder extended itself to about half way up each leg, on the *outside.* The whole desquamation, finally, put on a happy illustration of the fish-skin eruption. It may have been about two years before the disorder was thus entirely formed.

At the early period of the coming on of the complaint, the patient, at irregular intervals, was affected with rigors; these were sometimes succeeded by general febrile disturbance and considerable cerebral determination. After the continuance of the affection for two or three years, these constitutional symptoms lessened in activity, and his health became improved.

The patient was of a sanguine temperament, not particularly plethoric, though for a large portion of his life he suffered occasional attacks of epilepsy, which sometimes spontaneously left him, without much prostration of his strength, mental or physical; and at other times required copious depleting means for relief. His digestive organs through life preserved their wonted tone, but were frequently called into laborious duty by his generous habits of living. His situation in life and professional pursuits, enabled him to enjoy exercise in the open air, nor was he ever subjected to severity of application or close confinement. Neither on the part of his parents, nor of his brothers or sisters, did any appearance of a similar affection ever exhibit itself. One of his younger brothers suffered from attacks of catalepsy. His own children have no hereditary taint.

What were the causes of the eruptive diseases of S. J.? Minute inquiry has led to the following facts: in early age the patient entered largely into the indiscretions of youth, and did not escape the consequent penalties. His constitution was repeatedly subjected to severe mercurial treatment, which there is every reason to believe effected its wonted remedial changes. His system thus acted upon, may thereby have become predisposed to eruptive complaints; yet there was no assignable peculiarity either in his diet, regimen, or other circumstance, that could be deemed efficient in the causation of ichthyosis.

As to the treatment, he occasionally used aperients, calomel and jalap, the Epsom salts and magnesia, and the warm bath: locally he washed for a long period with Goulard's extract in solution, and applied the flannel roller. In January, 1824, he commenced with the Plummer's pills; for a considerable time used a weak solution of the corrosive sublimate; this was at intervals laid aside for the unguentum citrinum mixed with simple cerate, or the white precipitate ointment. The disease evidently was mitigated for a while by these means, but again returned with its accustomed energy. He now employed the warm bath more freely than formerly; the alterative pills of Plummer, or of corrosive sublimate were continued, and the white precipitate ointment with hellebore, and the bandage. He improved somewhat, but fearful of the vicarious consequences that often take place from the suppression of long-continued irritation and discharges, and aware of his tendency to epileptic attacks, he desisted from further medical prescriptions, and was satisfied to endure the inconveniences he had so long sustained.

Case II.—So long ago as the year 1810–11, the case now to be noticed, fell under the observation of the writer, while a pupil of Dr. Hosack. The subject of the disease was the late learned and eminent Dr. Dancer, of Jamaica, W. I. The character of his complaint was that form of ichthyosis which Dr. Willan has delineated under the name of *Ichthyosis cruris*, and his xixth plate most accurately exhibits the affection as it afflicted Dr. D. then about the sixtieth year of his age.

In this instance, the ichthyosis may justly be considered as among the evidences of that general vitiation of the body under which the patient had laboured many years. For a long time before the appearance of this cutaneous disorganization, he had endured the horrors of a disordered imagination, depressed mind, and disturbed digestion; great restlessness, irritability of stomach, pyrosis, flatulence, inordinate eructations of wind, and an irregular action of the functions of the bowels: the evacuations of the intestinal canal were scanty and depraved; sometimes surcharged with dark biliary secretions, at other times of a clay colour. The urine often very sparing, and loaded with adventitious matter, depositing a yellowish or branny sediment. Added to these distresses, he for more than four years was oppressed by a general and pervading dropsy. His dyspnœa was truly afflicting; pulse often scarcely perceptible, small, wiry, or intermittent. According to his own account of his symptoms, (a diary of which he carefully preserved,) more than twelve months had elapsed since he was able to lie down, or assume a horizontal posture. His skin, over the surface of his whole body, was of a dark, biliary aspect, but the cachectic state of his inferior extremities, now the more especial subject of consideration, extended from a short distance below the knees to near the division of the toes. His consequent incapacity of locomotion was great, and this condition of things was still worse at those periods when the cutaneous lamina cracked and poured out an acrimonious watery discharge.

It may be pardonable to enlarge a little more on this interesting case. Though there exists no need of accumulating facts to confirm the pathological truth, that general serous effusions or diabetes often prove the sequelæ of a vitiated habit: yet in the present instance, the universal dropsy of the sufferer, could be attributed to no other operative cause. Dr. D. entertained, for the most part, accurate views of the nature of his situation, but could not be prevailed on to believe, that of the number of his calamities he had water in the peritoneal cavity, until, by tapping, the necessity of which was urged upon him by his physician, Dr. H., nearly three gallons of water were thus drawn off. "I am fully aware of my disorder in all its hydra forms," he would say to his medical prescriber: "I have disorganization of the digestive apparatus, but no water in the belly;—my scrotum is as big as a watermelon;—and, doctor, my legs, they are the legs of the rhinoceros."

There can be no doubt of the agents which predisposed and led to the establishment of this disease. The patient's long residence in a hot climate, his excessive indulgence for many years in epicurean habits, and his total disregard of the monitions of his illustrious predecessor, Boerhaave, for the preservation of health,

Venus et Bacchus rarius colantur,

present circumstances which supersede any further investigation as to the origin of his hydropic and cachectic state. Great as were his bodily sufferings, anxious as he was for his recovery, yet momentarily apprehensive of dissolution, his well cultivated mind supported him in his severe trial, and occasionally exhibited proofs of its sustained force and acuteness. To an impertinent intruder, who at this ill-seasoned hour entered his room, when death had all but fulfilled his sad office, soliciting his subscription to a work on the immortality of the soul, with much effort raising his head, with great feeling and self-possession he answered, "friend, I am just making an experiment on that subject myself, and am in no need of human opinions about it."

Case III.—From the patient himself the following circumstances of his case have been derived. They can be fully depended upon, and furnish an instructive history of *hereditary ichthyosis.*

M. J. aged twenty-four years, is a native of Massachusetts: his ancestors, for several generations, were also natives of the same state. He has been afflicted with the disease from his infancy; the parts most affected are the following:—

The head is constantly surcharged with a large quantity of what the patient commonly calls dandriff, which freely comes off upon combing the hair. The face is entirely free and natural.

Of the superior extremities: on the anterior part of the neck, and partially on the shoulders, the scurf is considerable. From the shoulders to the wrists the arms and fore-arms are imbricated with this tegumen, which is larger and most compact on the arms. His whole trunk both anteriorly and posteriorly, are also invested with the disorder. On the lateral parts near the axilla it is scarcely visible. The lower portion of the abdomen is also covered with the like scales, which are lighter at the pubic region: the mammæ also participate in the disorganization, and are unduly tender.

Of the inferior extremities: the inside of the thighs are exempt, while the hips and the anterior and outer parts of the thighs are closely covered with these calcareous scales: there is but a very slight development of this morbid structure near and at the popliteal portion of the leg, but all below the knees on the anterior parts of the legs are closer invested than any other section of the body and with larger scales. At the feet, this scaliness seems to be gradually lost, so as to have little affected the insteps; and upon the ancles of both legs on each side, the integument is clear.

It is further to be remarked that the soles of the feet are softer than the palms of the hands, and that both are free of the infirmity: that the joints and those parts of the body where the perspirable secretion is greatest, are most free and natural; and that during the warmest period of the summer season, the disease so far disappears as to be scarcely at all perceptible: at the time of the transitions of the seasons from colder to warmer, the scales fall off in large quantities, especially at night; while at the coldest time of the winter the disorder is most extensive and formidable. Moist weather rather lessens the evil, while dry aggravates it.

There is nothing peculiar in the habits of the patient that can aid in accounting for the disease; he is temperate, not affected with unusual thirst, moderate in the use of animal food, and in nowise fond of salted provisions. He has never been subjected to the malign effects of mercury, nor suffered any glandular derangement: he bears without disadvantage the greatest fatigue; his virile organs possess more than the wonted energy of those functionaries, and his mind, though occasionally dejected, is remarkable for its activity and vigilance.

The present instance gives additional confirmation of the hereditary nature of this disease, though no case of this kind seems to have fallen under the cognizance of Dr. Willan. Nor, says the same distinguished author, in treating of this complaint was more than one child from the same parents affected with it. In several instances, adds he, the disease was said to have been connate, and in others to have occurred two or three months after birth: in one case it appeared soon after the small-pox, at the age of ten years, and has continued five or six years without alteration.*

On this point the ensuing facts are curious and instructive. His grandfather suffered from a like affection. His father was totally free from it. His grandmother and mother enjoyed the like immunity. Of five brothers, two suffer from it; the patient himself, the last but one of seven children, and his eldest brother, the second child. Of the two sisters, both are exempt from the slightest marks of the disorder; the eldest sister, aged about thirty-six years, has eight children, one of whom, a boy, has the complaint. The younger sister, who is the youngest child, has two children, one of whom, a girl seven years old, is affected in like manner.

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* Willan, 4to. page 199.

He has done little for his relief, cherishing no hopes of permanent benefit. Aperients, as the saline cathartics, and occasional doses of calomel and jalap, have been at various times prescribed by different physicians: the warm bath has always proved advantageous for a while. He has taken sulphur internally. He was once under the constitutional action of mercury, for an acute fever, but it wrought no change in the character of the ichthyosis. A solution of the corrosive sublimate, used as a lotion, gave temporary advantage. He has been recommended the use of iodine.

This cutaneous desquamation, has, in all these instances, appeared very early in life, between the first, second, and third year. It is proper to observe, that the appearance of this form of ichthyosis is like that happily depicted, under the name of *Ichthyosis simplex,* in the xviiith plate of Dr Willan. The squamæ, however, are in general larger and more crowded together. The sufferer has at no time been harassed with pustular eruptions; he has often complained of a universal dryness of the skin, and much itching. All his teeth became carious at an early age.

Case IV.—There is the less necessity for a minute description of the peculiarities in the appearance of this case, as the accompanying engraving presents to the observer a better idea of it than any language can impart. The drawings were made with the greatest fidelity by Dr. Alexander Clinton.

The history of the disorder is briefly as follows:—The patient was born in New England, and both his parents, who were Americans, had always been free from every vitiation of the skin or glandular disease. He was first seen by the writer about October, 1820. He was at that time, twenty-nine years of age: the cutaneous disorganization had been on him about sixteen months, but had somewhat varied at different periods in its character and extent. Previous to the first invasion of the complaint he had enjoyed good health, excepting occasional attacks of pulmonary irritation: about a year before the evidences of his impetigenous disorder came on, he was subjected to financial difficulties, and gave himself up to an indulgence in spirituous drinks, by which his strength was much broken, and a slight anasarcous condition of his lower limbs succeeded. These were the prominent occurrences which seem to indicate his malady to have been of constitutional origin. When the cutaneous disorder made its approach, he complained of occasional irregular pains of the back and limbs, headache, loss of appetite, and great depression of spirits. The bowels were irregular, and often torpid. As the autumn and winter advanced the form of his disease became more severe; he encountered greater constitutional disturbance, and febrile irritation. He was sometimes deprived of all power of pursuing his customary vocation, which required much exercise on foot, and he was rendered peculiarly susceptible of the variations in the temperature of the weather.

From some indications it now became more apparent that his general habit was vitiated. In different parts of his body slight discolourations of a scorbutic nature made their appearance. The exhalations of the skin were extremely offensive; his breath fœtid; the dejections of the alimentary canal at times dysenteric; and his strength lessened. These circumstances, however, were in a degree removed by the use which the patient of his own accord made of aperients, sublimed sulphur, warm bathing, and a diet mostly vegetable. Yet after a while he relapsed, and now supervened the ichthyosis delineated in the annexed drawings.

On its first appearance it occupied the middle and anterior portion of the leg, and much resembled the light scarlet-coloured spots marked *a*. These were followed by larger ones of a darker red colour, and after coalescence they here and there seemed to be constituted of groups of small verucæ, invested with different hues, some of a dark brown, and others of a greenish brown crust. The elevations were very irregular in height and shape, void of a laminated structure, and taking on the cauliflower appearance: slight cracks or fissures occasionally intervened, and a discharge somewhat purulent might be observed. Surrounding the lower part of the leg and the instep, the fish-skin desquamation was most conspicuous and enduring. There was no affection of the groins.

See Plate IV. figures 1 and 2 of the right leg. Figure 3 accurately shows the condition of the left leg. On both legs, at different times, deep excavations occurred by the ulceration which surrounded the base of some of these fungiform tubers, see fig. 3. *b*. Very slight injuries or abrasions would cause many of these elevations to drop off, sometimes they were snipped off with the scissors, little or no discharge following. Upon rising out of bed in the morning, a considerable portion of the fish-skin covering might be seen to have desquamated.

The present case furnishes facts directly in opposition to the assertion of Dr. Willan, that this disorder is never seen on the inner side of the leg.

The duration of this disease continued about five months after he had applied to the writer for relief. The patient being apprehensive of the fatal tendency of his complaint, too often surrendered himself to grief and its temporary alleviations, but by the earnest persuasion of friendship he was brought to yield to the severe discipline of appropriate dietetics and the materia medica.

In addition, he carefully guarded himself against exposure to the inclemencies of the weather, and other causes which materially aggravate the nature of cutaneous diseases. The medical treatment may be summed up in a few words. It is grateful to state that its issue was entirely successful; a fact of the greater value when the inveterate nature of this disease is considered. Since dismissed, there has been no recurrence of any of his symptoms, and for a period of seven years the patient has remained wholly free from the slightest affection of the skin.

After the free administration of active cathartics, such as calomel and the pulvis purgens; Epsom salts and magnesia; the infusion of senna and cremor tartar; the bowels was kept open by the occasional use of the rhubarb and magnesia mixture. He was enjoined the warm bath at the temperature of 96°, every other day. This was sometimes slightly medicated with the nitric acid. He also applied at intervals to the diseased surface the nitric acid in weak solution; this was found serviceable for a time, inducing very little pain or uneasiness, and acting as a salutary irritant on the tubercular excrescences.

The arid condition of his skin remained unaltered. Plummer's pills were ordered, one, morning and evening; these he took for many weeks, but sometimes substituting the pill hydrargyri or the corrosive sublimate in their stead. An ointment of the white precipitate of mercury with an equal portion of that of pitch, applied, *ter in die*, was attended with every desirable advantage. The excrescences ceased of their growth, and gradually diminished. Those parts where cicatrization was needed, were perceived to be undergoing that process.

A few drops daily of the arsenical solution was now given internally, and the affected parts touched with the same. After a short period he was recommended to take pulverized charcoal, united with about one-fourth its bulk of powdered myrrh. This prescription the writer had found very serviceable in that impaired state of the habit which is sometimes brought on by the united powers of syphilis and mercury, and it did not in this present case disappoint the high expectations anticipated. During the whole course of the treatment the greatest regard to cleanliness of the parts was enjoined, and the diet of the sufferer was mainly of the vegetable kind; latterly he was allowed the liberal use of porter. He also drank freely of the decoction of the sarsaparilla.

Pathologists have noticed a latent or occult stage in divers disorders, and this peculiar state seems to exist more commonly during the generation of cutaneous affections. Hence authors often differ as to the precursory symptoms of complaints of this nature. In Case IV. both from the history of the disease itself, as well as the circumstance of cure, that it ultimately yielded to strong constitutional remedies, it seems obvious that it originated independent of hereditary taint. There was nothing contagious in its character, the venereal passions of the patient were gratified without injury to his particeps lecti.

New York, June, 1828.

Art. II. *Observations on the Reunion of Fractured Bones, with Cases, illustrating the utility of Pressure in the treatment of Ununited Fracture.* By Thomas H. Wright, M. D. Physician to the Baltimore Alms-house Infirmary.

It is not the purpose of the present communication, to investigate particularly the causes which obstruct or defeat the efforts of the constitution to restore the unity of fractured bones. Those causes are various, and perhaps are generally understood, though few attempts seem to have been made to elucidate their nature, or point out their mode of influence. The main impediment to the process in question, has been referred, in general terms, to debility, or a certain defect of power, either of the whole system or of the part, to set up and maintain the proper formative actions. This state of disability may be the effect of common hurtful causes, which, either by their intensity or continuance, may depress the powers of the system below the point of energy necessary to the repair of great local injuries; or some specific causes, affecting the power of the constitution to preserve or restore its integrity of structure, are supposed to display their character and effect, chiefly in suspending or vitiating the action of ossification. Among the latter, are ranked the severer forms of scrofula, syphilis, scurvy, &c.

Whatever may be the effect of general or special causes on the constitution, in interrupting or altering the actions of nutrition, and particularly of the nutrient office of the arteries of bones, it seems probable that the state of ununited fracture, as it is commonly found, is often the result of circumstances independent of any remarkable general or specific disability of the whole system. Such a consequence is perhaps usually induced by causes whose range of operation or effect is confined very much, if not altogether, to the point of injury.

It is to local circumstances, either arising out of the character of the lesion, or casually interfering with the design and efforts of the constitution to repair the injury, that we are to look for the ordinary causes of ununited fracture. To the first class belong bad forms of compound or complicated fracture, in which there arises a necessity for extensive exfoliations, attended by inflammation, and perhaps repeated and profuse suppuration, before the bones can be brought into a state to undertake the work of permanent reunion. Here the energies of the parts become subdued by their being kept so long in a state of irritation, and forced into the performance of actions alien to the office of restoration. Hence it may happen, that before the tedious process necessary to remove all impediments to reunion out of the way is completed, the parts may have lost either the natural tendency to such union, or the power to effect it: an inefficient or altered action takes the place of the natural office, and the parts become accommodated to their new relations, without future efforts toward their original connection.*

Another class of causes which tend to frustrate the design of nature, in the repair of fractures, and the operation of which seems to be purely local, are all the circumstances which prevent such relation and repose of the parts as are essential to the perfection of the work to be performed. A certain correspondence of surfaces, and concert of action between the fractured extremities, are indispensable to firm union; and whatever tends to obstruct, either constantly or frequently, the state of contact and rest, will commonly hinder in part or altogether the act of reunion. Hence imperfect reduction or apposition of fractures, errors of position, improper or inefficient means of support, frequent or causeless movement of the parts, unrestrained mobility of the patient, inattention to the state and effect of the supporting means, the too early removal of the necessary defence by splints and bandage, and, lastly, premature or untimely attempts to bring the parts into action and use; all these, and more of a similar tendency, are calculated to disturb, and, at last, to defeat a process which can only be perfected when wholly guarded from such interruptions.

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* The ultimate defect of proper union, arising from those causes, obtains only in relation to the bones, because the lowest in vital energy and actions of the parts concerned. The soft parts around the fracture, (in cases complicated with wounds or suppuration,) regain their healthful function, and never cease their efforts to restore their natural integrity of structure and office.

It will sometimes happen, that in cases of fracture, where the nature of the injury involves a long train of repeated local inflammation, abscess, and exfoliations, the general system will be brought to suffer from sympathetic irritation, until its tone and energies are greatly impaired; and thus constitutional infirmity may be superadded to local weakness, as conjoint occasions of the imperfection which at last results. But it by no means necessarily occurs, that the constitution shall always suffer materially, or even in any sensible degree, in every case of compound or complicated fracture. Not uncommonly in fracture of the worst kind, attended by the usual signs and consequences of great local irritation, the constitution remains through the whole course of the injury, seemingly indifferent to the condition of the part; manifesting no concern in its morbid state, remaining exempt from fever, and coming through a long process of tardy repair of the part, with scarcely a sensible mark of hurt or disability, other than the simple result of protracted inaction.

In estimating the circumstances which impede the reunion of fractured bones, it has been common to rank advanced age among the causes of that defect. This state, in general, is no doubt distinguished by actions of waste, rather than reproduction, though it may perhaps be questioned whether the majority of instances of ununited fracture bear especial relation to any period of life. It is certain that such cases have frequently occurred in youth and middle age, and many of the determining causes of the imperfection in question, exert their influence independent of any predisposition or proclivity from time of life. Besides the general incompetency of old age, to institute new actions of formation, growth, or consolidation of parts, there is a condition of the body peculiar, with very few exceptions, to that era of life, which has been regarded as necessarily incompatible with the performance of any important acts of reorganization or repair of structure. It is known that the instruments of construction by which the organization is formed, preserved, and restored, often become at that period the subjects of a morbid state, calculated to impair or subvert their power of performing their natural office, while the vascular system frequently undergoes that remarkable change distinguished by the term ossfication, or, more properly perhaps, calcareous degeneration of the walls or tunics of the vessels; and it may be presumed that such a change occurring to the capillary series of nutrition, must greatly embarrass, if not wholly extinguish, their capacity to elaborate new parts, or restore connections which have been destroyed or lost. This state has been supposed to form, and may in reality constitute, another occasion of ununited fracture, and may be classed among general or local causes, according as the degeneracy in question may be extensively displayed through the vascular system, or obtain only among the capillary series of the extremities, to one of which fracture may have occurred. It seems sufficiently plain, that vessels in the state, (if I may be allowed the term,) of petrified tubes, are no longer fit to perform the secretory or nutrient office, by which the structure, life, and functions of the organization are maintained; and the effect of such transformation of the instruments of nutrition, when extensive or general, is manifest in the more or less rapid, yet certain decay or death of parts among which such conversion obtains.

I have adverted to the supposed influence of old age, in causing imperfection or failure of bony union, and readily assent to the general propriety with which the advanced and declining epochs of life, may be considered as unpropitious to the active functions of growth, nourishment, and renovation of parts, yet I have been frequently struck with the resources of the system in old age, as displayed in the prompt and perfect repair of injuries both of the soft and solid parts of the body. In the closing of wounds, the filling up and healing of extensive ulcers, and the firm reunion of fracture, it has occurred to me to observe all those processes accomplished with a facility and completeness scarcely exceeded at any age, in some instances where the subjects of such accidents had passed the eightieth year of life.

Ossification, or calcareous conversion of the vascular tunics, though a common occurrence at that period, is not the invariable concomitant of senescence; and though seldom occurring before middle age is past, does not correspond, either in origin or degree, to the *relative advance in life* of the individuals in whom such change may exist. It is found to have occurred in some persons at forty or fifty, in others at sixty or eighty years, and is sometimes present in a greater degree, (or more manifestly,) at the former than at the latter age.*

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* The most explicit instance of calcareous degeneration of the vascular coats, which has fallen under my notice, was displayed in the case of a man who died within a few days past, (April 6th,) at the Baltimore Alms-house. All the superficial arteries of distribution, as far as they could be traced, gave the sensation which results from pressure on solid chords or cylinders. No pulsation was discoverable in any of the vessels of the extremities. The subject was over ninety years of age, and died after a few days illness, with symptoms of subacute peritonitis, and irritative fever.

From all the means of judging which a few examples afford, I am inclined to the opinion, that some degree of ossific degeneration of the vessels of the extremities, would not invariably or necessarily involve a failure of bony union, should fracture occur to limbs thus circumstanced. It has been my duty to attend to more than one case of fracture of the leg, in individuals exhibiting distinctly free calcareous conversion of the tunics of the arteries of both the upper and lower extremities, where they were accessible to examination. Those cases presented ultimate apparent* consolidation of the fracture, though the process of bony union was sometime doubtful, and of tardy accomplishment, requiring unusual confinement, and more than common attention to the sustaining and intimate relation of parts. Possibly in those cases where bony union obtains in fractures, notwithstanding a calcareous state of the vessels of the limb, the nutrient arteries of the bones, may not be affected by the change which the capillary series of the surrounding soft parts have undergone.

The following cases are reported to illustrate a principle in the treatment of ununited fracture, which the untoward and embarrassing circumstances of the first case suggested, as offering the best promise of averting the great evil of permanent disability from such an accident. At the time this case was under treatment, I had met with no account of the similar intention first acted upon, it would seem, by Mr. AMESBURY, and since practised in one instance by Mr. BRODIE, and possibly by others. I allude to *pressure*, applied with the design maintaining ununited fractured surfaces in a state of more strict and continued apposition and contact, than had been accomplished, or attempted, by the means usually employed. I have not seen a particular exposition of Mr. Amesbury's views or propositions on this subject, and regarded his plan of treating fractures, as contemplating chiefly such support of the whole limb as would effectually sustain the apposition of the fractured points, and at the same time exempt the patient from the tedious confinement to position necessary under common modes of treatment. I am acquainted, in fact, only with the general design announced by Mr. Amesbury, in the treatment of fracture, and the apparatus used by him for the purpose, as published some years since; and was not aware that a regulated pressure, properly so distinguished, was distinctly involved in his plan, with the special purpose of preventing or remedying ultimate defect of union. But as Mr. Brodie refers his own adoption of strict pressure in the treatment of ununited fracture, to the suggestions of Mr. Amesbury, it is inferrible that the more explicit modern recommendation of the plan, may be attributed to that gentleman.

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* I use the term apparent, because the absence of obvious or sensible motion at the point of former fracture, is not absolute proof of bony consolidation. The point of fracture is sometimes so braced by ligamentous connexion, that no ordinary force will cause obvious movement in the part.

In the excellent treatise on fractures and dislocations, presented to the profession by Sir ASTLEY COOPER, the subject of pressure in fractures of tardy union is briefly noticed; though it seems to have been resorted to chiefly with the design of maintaining apposition in cases, where, from the nature and seat of the injury, there was particular tendency to separation of the fractured surfaces.* The work of Mr. Cooper, did not come into my hands, until some time after the termination of the first case reported, in which the expedient of pressure was suggested by the necessities of that case, and successfully employed. The plan of treating ununited fracture, which the profession, both at home and abroad, owes to the now veteran chief of American surgery—of whom we may well be proud, because, with so distinguished merit, he is not proud of himself—will, perhaps, always rank as the most efficient, probably the only efficient, mean in chronic cases of ununited fracture, especially in transverse ones of the large single bones of the extremities.

Cases of false articulation, as they were formerly termed, have been long objects of interest and embarrassment to surgeons, and were for the most part unmanageable by the resources of art employed for their correction. It was early discovered, that the cause of the defect consisted in a failure of the ossific process, and the substitution of a species of ligamento-cartilaginous matter, by which the fractured ends of the bone were covered, and separately rounded, so as to permit them to glide or move freely upon each other. The obvious indication suggested by this state of parts in ununited fracture, was to excite a new action in the fractured extremities, by which the natural bond of union might be produced. Hence we find the first attempts to correct false joints, were regulated by the intention of creating a state of inflammation in the ends of the bone, thus stimulating them to throw out the matter necessary to their consolidation. The earliest mean by which the design was attempted to be accomplished, was friction of the points of fracture upon each other, as frequently and forcibly as was deemed necessary to ensure a new state and new action in the parts. This method was said to have sometimes succeeded in establishing solid union, but the plan seems to have been loosely conducted, was soon in a great degree laid aside, and perhaps never effected what it intended. One prominent defect of the scheme, was, that no means appear to have been adopted to maintain such apposition of parts subsequent to the frictions, as was necessary to facilitate reunion.

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* See Case of Fracture near the Condyles of the Femur, reported by Mr. Wellbank, page 180.

A bolder scheme of treatment in ununited fracture succeeded. It consisted in cutting down to the false articulation, and sawing off the smooth extremities of the bone, thus reducing the parts as nearly as possible to the state in which they had been at the first moment of injury, and treating the case de novo, as a compound fracture. This plan has been often tried, with various success, and controverted credit. The French surgeons, (BOYER and others,) say it is an expedient seldom fortunate, and practicable only on limbs with single bones, the femur and humerus. The English surgeons, WHYTE, WARDROP, &c. speak confidently in commendation of this adventurous experiment, and of its successful application to double as well as single bones. The plan in question has certainly been sometimes effectual, but the serious degree of both local and constitutional irritation, which has often ensued to this operation, is justly considered a formidable objection to its employment, and it is now seldom practised.*

An important improvement on the plan of treating ununited fracture first practised, was suggested and brought into use about the year 1804, by Mr. White, of Manchester. Acting on the intention originally consulted, he at the same time placed the parts under circumstances favourable to the end proposed, and thus remedied the defect which had almost always frustrated the design under the first method of treatment. Mr. White applied to the limb in which a false joint existed, the thigh for example, a strong case, made of sole or saddle leather, lined with a soft material, and adapted to the length and figure of the limb. The case extended from the great trochanter, ileum, and ramus of the pubis to the patella and condyles, was made to embrace the thigh as closely as possible, and buckled firmly on by straps, so as to prevent the ends of bone at the false joint from sliding out of their proper and direct apposition to each other. The case was worn constantly for the necessary period, was kept firmly braced by the straps, and the patient directed to walk about, and use the limb as much as possible. Drs. Inglis and Brown report cases of false articulation treated in the Royal Infirmary of Edinburgh on the plan of Mr. White, with complete success. Examples are related of patients in the infirmary with ununited fracture of the thigh, upon whom the case was applied, the patient sent into the country, with the proper directions for the management of the apparatus, and his returning in a month or two afterwards, walking well and firmly, and bringing the case in his hand to restore it to the institution. The period of time for which it was found necessary to maintain strict support by the case and straps, varied from five weeks to two or three months.

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* The successful excision of carious and shattered joints, by Park, the Moreaus, Larrey, &c. give strong collateral sanction to a similar surgery in cases of false joint. But perhaps no instance on record bears with more direct analogy on the question of operation in such cases, (all other means of effecting reunion having failed,) than the unique and triumphant experiment performed by Dr. Barton, in the Pennsylvania Hospital, for the *creation of a false joint.* An enterprize projected on sound science, proposed with honourable caution and candour, executed with great skill, and justified not more by the event than by the magnitude of the evil to be overcome, and the importance of the benefit contemplated.

It is evident that the design and management by the case and straps, with free motion of the limb, as just described, differs somewhat from that by pressure, with rest—or what may be termed still-pressure. In the one case, the direct gravitation of the body upon the false articulation, seems calculated to induce a high degree of irritation upon the antagonizing points of bone, while the very free use of the member in locomotion must cause a constant, though limited range of friction between the relative surfaces. Such a state of things, namely, great pressure, and constant play of parts, would appear likely to produce bad consequences in one of two ways, either by inducing excessive local and constitutional irritation, or on the other hand, by accustoming the parts to forcible contract, and free movement, to confirm the state of insensibility and indolence of action, which had caused the original failure of union. But adversary hypothesis must be silent in the presence of facts. We are told on good authority, that the plan has been often and completely successful. By the process of pressure with rests of parts, nothing more is designed than first to promote absorption of the foreign covering of the fractured points, and thus attaining and preserving an intimate and uniform approximation of bony surfaces. If this can be attained, the system and the laws of the part will generally accomplish the rest. Without speculation on the why or wherefore of such actions, we know that if the divided surfaces of bone can be brought and maintained in a state of closeness, without the intervention of any substance foreign to their own constitution, they possess, and will exert a natural tendency to unite by bone—or what is the same thing, actions of formation take place under such circumstances, which actions, when perfected, result in a solid homogeneous contexture of parts.

Case I.—A master carpenter, ascending to the roof of a house, (October, 1826,) slipped from the ladder when near the top, and fell about twenty feet, to a scaffold, raised a small height above the pavement. He dropped to the scaffold so that the momentum of the body and the force of concussion, was sustained chiefly on the right limb, which was fractured just above the ancle. The fracture was a very bad one, traversing the tibia obliquely for some inches, and rendered compound and complicated, by fracture of the fibula also, and the penetration of the superior fragment of the tibia, through a ragged wound of the integuments, two inches in extent. The patient was seen in a few minutes by a physician of knowledge and experience, by whom the parts were promptly adjusted in the best possible manner. After the patient had been conveyed home, the interest and alarm of some of his friends, induced them to urge calling myself also to the case. I according saw the patient in concert with the gentleman who attended in the first instance.

On examining the injury, the fractured points were found fairly together, and requiring no interference; but hæmorrhage from the wound was considerable, and after fruitless attempts to restrain it effectually by compression, it became necessary to seek out and tie, one or two, (the internal malleolar) arteries. Even then troublesome oozing continued, and as the stream was found flowing from deep in the fissure of the bone, it could only be controlled by putting down on the bleeding point a compress of sponge, which being pressed in firmly by a probe, put a stop to the bleeding. Compression in this manner was rendered easy in consequence of some vacant space caused by the removal of several pieces of bone which had been found lying loose in the course of the fracture.

The injured limb was extended on a firm surface, and well supported by broad splints on each side, braced above the knee, and reaching some inches below the foot, where the ends of the splints were locked at the proper distance, by a transverse bar received into corresponding mortices, and the leg well cushioned within the splints by soft pads made for the purpose. The wound was lightly dressed, and no bandage thrown immediately around the limb. From the lacerated state of the integuments, some comminution of the bones, and the great obliquity of the fracture rendering the point of the upper fragment of the tibia extremely thin, sharp, and probably destitute of sufficient connections for its support, it was to be expected that high inflammation, and some exfoliation, were likely to ensue. The limb was therefore left without close dressing, to avoid irritation, and that it might be conveniently accessible for such local application as might be deemed necessary, in correspondence with the general treatment, to avert or limit the consequences to be apprehended.

In the course of the second day from the accident, great constitutional disturbance, with irritative fever, sat in, and wore for a short time a menacing aspect. Timely bleeding and purging, followed by a full anodyne impression, allayed the tumult, and brought about a calm and comfortable state. On the fourth day the wound was examined, the sponge compress removed, and a light dressing applied. The leg was not sensibly affected by swelling or inflammation, and it continued free from any unpleasant state for two weeks from the time of the accident, the wound suppurating well, and the patient's health as sound as usual. At the end of that period a change for the worse occurred. The wound, which had contracted a good deal, became gleety, the integuments tumid and dark coloured, the limb swollen, hot, and painful: the patient was at the same time affected by chills and flushing. This state of things ended in abscess, re-opening of the wound, and exfoliation from the point of the upper fragment. It is unnecessary to encumber the narrative with a minute account of the treatment pursued. The antiphlogistic and soothing plan, general and local, were steadily enforced, as far as circumstances indicated.

After this interruption, circumstances again wore a favourable aspect, and by the 28th of November, (six weeks after the accident,) the limb had lost all remains of inflammation and swelling; the wound was almost closed, a good deal of apparent firmness existed about the fracture, and there seemed every probability of perfect consolidation. This pleasing expectation was speedily disappointed. Inflammation and tumefaction again took place, followed by suppuration, and more pieces of bone were found detached and taken away. During this second painful process of suppuration and exfoliation, the limb lost all that was previously accomplished toward reunion, and now at the end of eight weeks the parts could not be regarded as more advanced towards recovery than on the first day of injury. The fractured ends of the tibia moved free and loose, and an open wound of some extent, communicated with the chasm or fissure between the fractured points.

The consequences of this second suppurating and exfoliating action gradually passed off, and again there seemed an almost successful effort on the part of the constitution, to restore the entireness of both the solid and soft parts. The wound closed in, the bone became comparatively firm, and the limb recovered nearly its natural appearance. Such continued the state of the parts for about two weeks succeeding the last occurrence of suppuration, &c. in all ten weeks from the date of fracture. Then ensued a condition of parts more inauspicious than ever. Inflammatory œdema supervened, the whole limb swelled to great bulk, vesications formed every where on the surface, and the characters of œdematose and vesicular erysipelas were displayed over the limb in almost their worst form. This new and threatening state of things called for very great care, to prevent consequences serious alike to the part and to the system. Mild fomentations diligently maintained, strict repose of the parts, and soothing general means, aided by a constitution naturally excellent, and never abused, fortunately led on to the least hurtful termination which circumstances admitted. Free suppuration took place in the limb, the matter was discharged by incision, and the local and constitutional irritation gradually subsided. No exfoliation followed this greater than either the preceding suppurations, but there had now arrived a crisis truly discouraging. The whole business of repair was to be commenced anew for the third time. Every mark of bony union had disappeared under the high inflammation, great tumefaction, and suppuration, which severely tried the life and organisation of the whole limb. The new formations, being least able to bear the change, had all given way, and when the tension of the parts relaxed, the bones were found lying without connection, the lower fragment, with the foot attached, yielding in any direction to the slightest impulse, and requiring the most careful support to prevent the foot from declining, by its own weight, very much out of the proper axis of the limb.

Nearly three months had passed since the date of the fracture, and nothing effectual had been done toward the important end of repairing the broken bone.* But there was still room to hope for ultimate success. The patient's constitutional powers remained firm in a great degree, under so many depressing and disturbing causes. Though affected considerably during the acute periods of inflammation and suppuration in the limb, his system rallied promptly and fully when these states passed by. Strict repose of the part was still enforced—the limb kept in position, sustained by external splints and an interior padding, adapted to all the curvatures of the leg. By perseverance in these measures, the limb put on a state of great improvement, the natural figure and size was regained, and the tendency to inflammation seemed to be entirely lost. In three weeks after the last mentioned suppuration, (fourteen from the accident,) the wound of the integuments was healed, and the whole exterior of the limb looked in every respect well. The splints were now removed, to ascertain by a cautious examination the state of the bone in the line of fracture. We had then the mortification to discover a total failure in the main object of all our care. There existed a manifest disjunction of the tibia throughout the whole extent of fracture; and so complete was the disunion, that when the leg rested on the hands above the point of fracture, the foot dropped away from the upper fragment, causing the point of the latter to project one-fourth of an inch above the level of the portion of the tibia attached to the foot. By the gravitation of the foot and inferior fragment, the line of the fissure was also made to open so sensibly, that the point of the finger could be insinuated in some degree between the sides of the fracture, carrying the integument before it into the chasm. Rotation of the foot likewise caused an obvious play of alternate opening and closing in the line of separation.

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* This remark applies to the tibia. The fibula had united early, and did not afterwards give way.

Not wholly discouraged by this unpromising state, it was determined to persevere in such measures as seemed suited to promote final union. A close bandage, hitherto inapplicable from tenderness and proclivity to inflammation, was applied moderately tight, to give more direct support about the fracture, and the external splints continued. Under this treatment the limb remained free from inflammation, swelling or pain; the wound of the soft parts was firmly repaired, and the colour, shape, and feeling of the limb the same as before the accident. But raising the leg from the splints, or rotating the limb by the foot, it was evident that the tibia was totally discontinuous at the point of fracture. The fractured surfaces could be brought together, and made to move liberally on each other, but there was no longer any sensible crepitation. The inequalities proper to fracture were filled in, and smoothed over, by that fibrous deposit which comes at last to constitute the covering of fractured surfaces that have missed the bony reunion. The prospect of ultimate consolidation by the energies of the constitution, and the common mode of local management was utterly extinguished in the present case, by the state of the limb as just represented.

While anxiously looking for some resort calculated to avert from a worthy man, with a large family, the terrible evil of permanent lameness, it occurred to us that we might find in pressure steadily maintained, the mean best suited to the indication in the present case.

It was plain that mere apposition was not sufficient, under the peculiar circumstances of the case, to induce consolidation. The parts had been kept in a state of approximation and repose for four weeks succeeding the last suppuration, yet no bony union resulted. Something more than mere propinquity and rest of parts was now required. It had become necessary to cause absorption of the substance formed on the ends of the fracture, and at the same time to excite on those surfaces new attempts to the deposition of bone. Pressure presented the best promise of effecting those objects, and to be efficient it was evident that it must be as strict as the health of the soft parts would permit, and continued without remission for a sufficient time.

The simple, efficient, and surgical mode of making pressure by the tourniquet, since successfully practised by Mr. Brodie, did not occur to me. A strong, soft, double napkin was passed under the leg, extending from below the ancle, to the head of the tibia, pad-compresses of suitable size, were laid, which, when braced by the general bandage, acted as counter-wedges on the line of fracture. The bandage or napkin first laid, was drawn firmly around the limb, and confined at short spaces; at first by large pins, and afterwards by tacks. It was thus made to give uniform support and a regulated pressure through the compresses on the line of fracture, and to adapt itself closely to the contour of the whole limb from below the ancle, sustaining the inferior fragment to the top of the leg. The principle, in short, was that of the laced stocking, modified to act especially on a definite point and space. The compressing bandage was inspected, and generally tightened twice a day, and always drawn as firmly as the patient's feelings would allow. The limb was kept extended and in splints, to maintain steadiness, and preserve the correct axis of the foot on the leg.

The favourable tendency of this treatment soon became manifest. In ten days the chasm or interval of the edges of the bone along the line of fracture, was much diminished, the bones having sensibly approximated by absorption of the interposed deposit. After three weeks the depression which had always marked the line of fracture, and extent of separation, was obliterated to the touch, and the ends of bone seemed in close contact. Now, too, the tendency to eversion of the foot was lost, and moderate lateral pressure on the foot did not cause any parting at the fissure. A further particular detail is unnecessary, perseverance in the course described, produced at the end of five weeks from its adoption, unequivocal bony union. At that period the patient could elevate the whole limb; flex, extend, and rotate the foot freely, without the slightest evidence of motion in the line of fracture. The splints were thrown off, but the compressing bandage directed to be worn less firmly applied for some weeks, and the patient admonished to avoid for the present throwing the weight of the body on the affected limb.

The cure in this case became perfect, and when the limb was enough recovered to take its share of weight and motion, it was found to have shortened less than one-fourth of an inch. The man walks now without halting, and as firmly and well on one limb as the other. This patient was confined to bed nineteen weeks and two days; and it was six months from the accident, before the consolidation was sufficient to permit use of the limb in walking.

Case II.—In August, 1827, a man, aged sixty-one years, designing to elope from the Baltimore Alm-house, to get liquor, as stated, jumped or dropped from a wall twelve feet high. He alighted on his feet, but immediately fell and was unable to rise again, so as to stand or walk. He was soon discovered, and brought into the surgical ward, when, on examination, the left leg was found broken, both bones, near the articulation with the foot. The fracture of the tibia was very oblique, and almost compound, the integument being partially cut through by the projecting upper fragment.

The bones were adjusted, the limb moderately extended and laid in a fracture box well cushioned, but was left without close bandage, to admit the free use of applications designed to allay inflammation and swelling, which had commenced, and were likely to be severe. Very great intumescence followed, with diffused inflammation, pain, &c. and it was nearly a fortnight before these were reduced sufficiently to allow close dressing. The limb was then braced around by an eighteen-tailed bandage, and sustained in position by the leg-splints of Mr. Cooper, formed with the lateral supports for the foot. The patient's constitution stood the shock without disturbance, and every thing went on apparently well for five weeks, the bandage and splints being adjusted as occasion required. At the end of that period, the splints and bandage were removed, to examine the state of the fracture. The fibula was found consolidated, but there was free motion at the line of fracture through the tibia. No crepitation could be distinguished, though the fractured surfaces were made to glide on each other with considerable force. The eighteen-tailed bandage was again wrapped closely about the leg, the limb placed in position, and the splints re-applied. This plan was continued three weeks longer—eight weeks entire—when the fracture of the tibia was found still ununited.

The case was altogether unpromising. The patient was over sixty years of age, and although showing the remains of a naturally good constitution, was, in many respects, a bad subject for fracture. Previous to the accident, the leg was in a state of chronic enlargement, from infiltration and thickening of the cellular tissue. On the leg not fractured, there existed a large ulcer, of some years duration, which could not, by the utmost attention, be brought to cicatrize. Superadded to those evidences of diminished power of natural action in the lower limbs, this patient showed in all the tangible arteries of the extremities, an advanced degree of calcareous transformation. An indurated and knotty state of the tunics, was distinctly traceable in all the superficial trunks, and it is then always probable that similar degeneration obtains in the ultimate vascular series of nutrition.

It was determined to try strict and continued pressure. With this intention, a roller was laid regularly from the toes to the knee. Over this was applied short splints, made of binder's boards cut to suit the outline of the limb, then macerated, that they might be made to adapt themselves intimately to the surface about the fracture. Those splints were laid, while pliable from wetness, on opposite sides of the fracture, and braced in their place, as firmly as could be borne, by a second roller, carried from the ancle to the top of the leg. Two lateral splints of the same material, not macerated, were next applied and secured at intervals by a few turns of a roller. These splints were sufficiently long to steady the leg, and prevent motion of the foot, the wood splints first used were laid aside, and the patient confined to bed, with the limb extended. An occasional change from the recumbent to the sitting posture, was allowed the patient; but he was altogether prohibited from getting out of bed or bringing the limb into use.

An evident change in the relation and aspect of the parts, was observed in a fortnight after this course was instituted. When the plan of compression was adopted, the superior fragment of the tibia projected so sensibly at the point of separation, as to cause much deformity by its remarkable prominence. At the end of two weeks, this projection was much reduced, and by the fourth week, the bone had regained its natural level; doubtless, by the influence of pressure on the deposited matter, which had occupied the interval between the fractured surfaces. The facility and range of motion at the fracture, were also lessened though still discoverable. The pressure, together with confinement to position, were steadily maintained for six weeks. The long splints were then taken off, and the patient permitted to put the limb to the floor, and, supported by crutches, to bring it cautiously into use. The roller and close splints were kept on some time longer.

When the point of fracture was examined, some weeks after the patient began to use the limb, the part appeared very firm. No pressure, which it was thought proper or necessary to employ, whether directed immediately to the fracture, or by using the foot as a lever to rotate the limb freely, caused the slightest indication of disunion. In a month or six weeks after the limb had been brought into use, the patient threw aside all artificial supports, and walked as well as before the accident. There is no discoverable shortening of the leg.

I have doubts as to the fact of proper bony union in this case; and those doubts rest on the general circumstances of the patient, stated in the narrative, as having been adverse to union in the first instance. There is certainly nothing in the state of the part, viewed abstractly, to warrant the suspicion of heterogeneous connexion, no force that can be properly employed, causes motion of the part, nor does it yield at all to the gravitation of the body. But instances have occurred, in which pseudo union, or fibrous anchylosis, after fracture, has been so strict and firm as not to have been manifest, either by sensible motion or defect of power in the part, and were only casually discovered during some autopsic examination. Mr. Cooper, I think, mentions such a case. Even if it be the fact, that actual consolidation has not obtained in the case just reported, pressure has not, on that account, been the less an important or beneficial mean of treatment. It has restored the limb to a state of usefulness it would not otherwise have regained. Neither always, nor generally does it happen, that the weakness and discomfort of a false joint, are spontaneously overcome in course of time. Cases have been shown to me of disunion of the tibia from fracture, in which, after three years, the mobility was stated to be greater than it had been at the end of three months, and would have altogether prevented walking but for the partial support of the fibula.

Case III.—A man was brought to the Baltimore Alms-house, sixth of January, 1828, with his head much cut, and his left arm in a state of excessive tumefaction, from blows given with a heavy stick. On examination, the ulna was found broken about the middle, but the inflammation and swelling were so great as to prevent the immediate use of bandage and splints. The limb was kept at rest, under the use of local applications designed to subdue inflammation, and this being sufficiently accomplished in six or eight days, the points of fracture were coaptated, and well sustained by splints, in the usual mode. The forearm was suspended in a state of easy flexion.

Every necessary attention was paid throughout the treatment of this case to preserve proper relation of the bones to each other, repose of the parts, and due support; yet at the end of five weeks the fracture was found as susceptible of motion, as at first. This man was at the middle age of life, of apparently sound constitution, and the failure of union could only be accounted for, from the very great inflammation, intumescence, and effusion, which had pervaded the limb in consequence of the blows, and the general disability in which the parts had been left when these passed off.

Pressure was resorted to in this instance also. A roller was laid smoothly from the fingers to, and some distance above the elbow. Short splints, of binder's board, were fitted to the interior and external surface of the limb, to afford sufficient lateral support, and were well secured in place by a roller. A long splint of binder's board, incurved, and adapted to the arm, was laid along its ulnar line, extending below the wrist to support the hand, and a shorter splint of the same material rested on the radial side, the two forming an external case for the arm, not quite close, or meeting at the edges. The splints were made to embrace the arm by straps at short spaces, which, particularly at and near the fracture, were drawn as tight as could be borne. A due degree of pressure was thus constantly maintained as long as necessary, and the result was satisfactory in this instance as in the preceding cases. But considering the age and health of the patient, and the character and seat of the fracture, consolidation was here very tardily effected. It required two months perseverance in the treatment by pressure before motion at the point of fracture ceased altogether. Now, however, fourteen weeks from the date of injury, union is perfect. The slow repair, even under close pressure and strict rest of parts, is perhaps attributable to the same cause which is supposed to have defeated union by the first process, namely, the feeble manner in which the actions of life were performed in the limb, in consequence of its having recently suffered so great inflammatory disturbance.

Baltimore, June, 1828.

Art. III. *Case of Pulmonary Consumption, showing the Influence of a Sea Voyage on that Disease.* By John Spence, M. D. of Dumfries, Va.

J. S. in the winter of 1786–7, when attending the medical lectures at Edinburgh, and at that time twenty years of age, was attacked with a severe cough and pain in the breast, which yielded in violence to the usual antiphlogistic remedies, but continued troublesome the whole winter. He recollects that being obliged to attend Dr. Cullen's lectures at nine o'clock in the morning, an hour at that season of the year, and in that northerly region, very inauspicious for patients to turn out who labour under pectoral complaints, the weather being generally cold, raw, and cloudy; his cough was often so distressing as to attract the attention of the old professor. By great care and temperance, however, he was enabled to pay the necessary attention to his studies; and, as he expectorated no purulent matter nor blood, he regarded it as a violent catarrhal affection, which would yield to the benign influence of summer, with proper attention to diet and exercise. In this respect he was not altogether without hopes of being gratified—for his cough, though it never left him, was by no means so troublesome during the warm weather.

He now began, with some flattering prospects, to turn his attention to the duties of his profession, (having studied five years at the college of Edinburgh, four of which were solely devoted to physic,) but these prospects were soon blasted by the cough returning with increased severity in the fall of 1787, which soon disqualified him for active exertions, and compelled him to take up his abode at his native place, Moffat, a fine inland village in the south of Scotland, much resorted to by strangers on account of its medicinal springs. Here he tried as fully as possible all the known remedies, as directed by the first Scottish physicians—and so numerous were the blisters and plasters he found necessary to apply, that his breast at this day is as smooth as the palm of the hand. These remedies, though faithfully attended to, seemed only to palliate symptoms, not to check the disease in its career: for almost every night, or rather towards morning, he had considerable sweats, attended with a harassing cough and gross expectoration, and he daily became more and more emaciated.

Seeing that all the prescriptions he used availed but little, he thought the last and only means of saving his life, would be an extensive sea-voyage in a warm climate; but here he was again disappointed, for his father, who had spent a good deal on his education, could not supply him with funds to carry this project into effect. Being now without relief and without hope, it may be easily supposed that the winter of 1787–88 was to him a most gloomy one—and, knowing some of his nearest relations had been carried off by similar complaints, (indeed out of a family of nine children, only *two* are now alive,) he began to prepare himself for his doom with as much composure as he was capable of.

In the spring of 1788, when in this extreme state of dejection, an eminent merchant in Glasgow, who is still living, and who had shown this patient much kindness during his residence at the Moffat springs, wrote to him to know if he would accept of the place of tutor to his brother's children in Virginia, observing at the same time that the voyage might restore his health. This offer he readily embraced, and the more so, as the vessel in which he was to take his passage, was not to sail till June.

Having closed his engagement, he set out for Edinburgh in April, 1788, to take advantage of the aid of his old preceptors while he remained in Scotland. Here he continued to pursue in every respect the antiphlogistic regimen, living chiefly on milk and vegetables, and riding out on horseback every good day. As the weather became warmer, his strength rather recruited—but his night sweats, cough, and expectoration were very alarming, and his pulse varied from 100 to 120.

About the middle of June he arrived at Port Glasgow, and sailed a few day after, not without melancholy forebodings. After leaving St. George's Channel, the north-west and westerly winds were so prevalent, as to induce the captain to steer his course directly south, on purpose to reach the trade winds as soon as possible. In about three weeks from the time of sailing, they were near the latitude of 30°, and so far to the eastward of Madeira as to have a distant view of the African coast.

During these three weeks, this patient laboured almost perpetually, and particularly in the bay of Biscay, where the sea was very rough, under a distressing sea-sickness, insomuch that his stomach rejected almost every thing he ate. Gingerbread was almost his whole sustenance—but he had the satisfaction of finding all his pectoral complaints getting daily better, and by this time his pulse had fallen as low as eighty strokes in a minute. Extreme inanition rendered him very weak.

Having met with the trade wind in latitude 30°, on the 17th of July, there was a fine steady breeze for about twenty days, and the captain advanced as far to the southward as latitude 24°. The breeze indeed was so regular, that not a single sail was touched while in the tropical regions, a circumstance which had never occurred to the oldest sailor on board. In this immense tract of ocean the weather was serene, and the climate most heavenly. The subject of this narrative having for amusement kept a register of the weather during his passage, found in these latitudes, that, during the night, the thermometer was never lower than 75°, and never higher in the shade during the day than 78½°.

As the vessel now moved very steadily, his sea-sickness in a great measure left him, and he had a keen appetite. His breakfast was an uncommon one, but to him very grateful—it consisted of Scotch meal porridge, porter and sugar—and he generally dined on barley broth, with a bit of boiled or roast fowl and vegetables. After dinner he sometimes indulged in a glass of wine and water. During this happy period of the voyage, when every soul on board was cheerful, and, when the sailors, having little to do, passed every evening in sportive games, he experienced all the satisfaction that can arise from returning health and strength.

On leaving the trade winds, that squally, tempestuous weather, which prevails so much during the month of August on the American coast, frequently occurred; and whenever the sea was agitated, he invariably suffered excessive nausea. During the last fortnight of the voyage, indeed, this nausea was so great, that, though he had a voracious appetite, he was for many days entirely without nourishment.

On the 25th of August he landed in Virginia, after a voyage of eight weeks and some days, relieved from his hectic fever, pain of the breast and purulent expectoration, nor was his cough troublesome: but his debility was so great, that having occasion to ride fifteen miles into the country the second day after his arrival, he was so fatigued, after this short excursion, as to be under the necessity of going to bed.

Since that time till now he has enjoyed, upon the whole, good health, never having suffered much by any complaints, except those of a bilious nature. For some years past he has been engaged extensively in the duties of his medical profession, subjected to the various vicissitudes of heat and of cold, during day and night, without any return of his cough, or any affection of the lungs which gave him uneasiness.

The inferences to be drawn from the foregoing narrative will be obvious to every medical reader. It clearly points out the advantages to be derived, in consumptive cases, from an extensive sea-voyage, at a favourable season of the year, or in a warm climate. A favourable season of the year is here particularly mentioned, because the writer of this case has heard Dr. Cullen insist upon this injunction, the doctor having mentioned at the same time, that two young gentlemen, labouring under this disease, whom he advised to visit Madeira, died soon after reaching the island, in consequence of the weather during their voyage being excessively stormy, when they were very actively engaged with the whole crew, in trying to save the vessel from destruction. These violent bodily exertions, he supposed, hastened their doom.

In the history of this case, it will be observed, that in a voyage of eight weeks, this patient, from great irritability, was subject nearly five weeks to sea-sickness, or a constant nausea. To these effects of the motion of the vessel, however explained, he ascribes his cure. Though he did not lose his appetite, he was prevented from receiving regular nutritious diet—and, therefore, if *abstinence* be useful in this disease, this nausea certainly gave him all its advantges. By the agitated motions of the ship so often exciting nausea, he supposed his pulse was lowered and his febrile paroxysms abated; and, perhaps, by increasing absorption, the ulcers of the lungs were thereby disposed to heal more readily.

May not the foxglove, so remarkable in lowering the pulse, and in relieving distressing coughs, operate in the same way? Dr. Beddoes, in his Essay on Pulmonary Consumption, laments the want of an auxiliary to the singular efficacy of this useful plant? May not a *long* sea-voyage in a mild climate be the best auxiliary yet known—or, may not the foxglove be so managed as to enable a patient to unite the virtues of this medicine to the advantages of a sea-voyage?

In the above narrative, the private circumstances of the patient are purposely noted, that the state of his mind might be better understood. If disappointment, dejection, and the apprehension of death have any influence in this disease, (and by some eminent late physicians, these depressing passions are supposed to have a favourable influence,) they certainly operated in this case to their full extent. Being a medical man, he was not unacquainted with his danger, which the fate of some of his nearest relations impressed most seriously on his mind; and these impressions were not a little increased by the anxious looks of his aged parents. During the forementioned winter, he did not enjoy a "single ray of that cheerfulness, that ever-springing hope, which has been observed to be the attendant of hectic fever, and to brighten the gloom of the consumptive patient."

Virginia, November, 1800.

ART. IV. *On Intemperance considered as a Disease and susceptible of Cure.* By JOHN H. KAIN, M. D. of Shelbyville, Tenn.

AN intemperate indulgence in the use of stimulating liquors has long been viewed as the cause of a host of those diseases to which the human body is subject. That depraved appetite which bids defiance to all moral restraint, and impels the unhappy sufferer to the gratification of a propensity which increases his disease, while it lulls his sufferings, has never received that attention from physicians, which its importance demands. Bulimia, salacitas, and nymphomania, diseases in which natural appetites and passions are morbidly excited, have found their places in all systems of medical nosology, and have received a just share of the attention of medical men. A morbid thirst for intoxicating liquors has only been considered a moral disease, and for its cure moral remedies have been thought sufficient. As well might we address arguments to a burning fever, as to think by moral considerations to appease the hunger which is felt in bulimia, or that anorexia and gnawing sensation, which solicits so importunately in the drunkard for the inebriating draught.

Is it not a subject, worthy of the candid consideration of the profession at least, whether too much ignominy has not been attached to a propensity, which the most worthy of our species have been unable to resist? Men, whose conduct in their lucid moments has been most unexceptionable, who are known to possess most amiable dispositions, whose moral worth cannot be disputed, and whose talents are often enviable—such men, in consequence of an unhappy propensity, which I hope to prove to be a disease, have been branded with infamy; and even physicians have united with the pulpit and the press, to reduce them to a level with brutes. A disease which has done incalculable injury to the constitutions and the morals of men, has been combatted only with words, and the unhappy sufferers instead of receiving the commisseration of their fellow men, have been left to aggravate their disease by their imprudence, or held up to the public view as objects of scorn.

When we have seen an emaciated subject of bulimia, consuming nearly half his weight of raw beef, candles, &c. at a meal, we have not hesitated to award him our pity, and have felt happy if we could contribute to the restoration of his health. The nymphomaniac too, has received a no less share of our condolence; and instead of reasoning with her disorder, or holding up her case to the view of mankind as an astonishing instance of lust and immodesty, we have used the lancet, and directed such general remedies and local applications as are calculated to relieve the disorder. The deluded maniac is often impelled, by an insatiable revenge, to imbrue his hands in the blood of his friend; but the time has passed by when for this he is punished with chains, a dungeon, or a gibbet. He is the subject of medical treatment, and as the light of science advances, and the mysterious connection between the body and the mind becomes better understood, it is not improbable that these diseases will be brought to bow before our art.

Without giving any other name to this disordered appetite which is the subject of consideration, than those commonly applied to it, I would suggest the propriety of making it a species of Good's genus *Dipsosis*, of the class *Celiaca*, and order *Enterica*. The symptoms of this disease are too well known, and have been by too many felt, to require a particular description. It has its seat in the stomach, and is no doubt produced by a perverted or disordered action of that viscus. One of the most common remote causes of intemperance, is the habit of relieving the anorexia felt before refection, with a glass of wine, spirits, or bitters. Those who eat much and exercise but little; those who are much exposed to the depressing passions; those who undergo great fatigue of body or mind, especially if unsuccessful in their pursuits; those who inordinately indulge the passions of anger, lust, and ribaldry; and those who habitually take tonic and stimulating medicines in spirituous and vinous menstrua, are very apt to become drunkards. The disease, or the tendency to it, is first perceived after being exposed to some of these causes. After an evening debauch, or what the patient would call a party of pleasure, he feels a want of appetite when he comes to his breakfast the next morning: this is readily relieved by a glass of bitters or a cup of very strong coffee, and the enfeebled stomach is goaded on to perform wonders in the eating way. The consequence of such exertion is an impaired digestion, and a heavy, horrible sensation is felt in the region of the stomach. To this is added an indescribably gloomy state of mind. The patient finds business burdensome and solitude insupportable. He flies to the tavern or the doctor, to his medicine chest or the brandy bottle, and soon obtains a temporary truce. A glass of toddy, punch, or sling, soothes his outraged stomach, and prepares him for dinner. If he have no dinner, another glass or two suits him as well, and what he fails in eating he makes up in drinking. It is unnecessary to pursue the history further. He rises the next morning with increased anorexia, nausea, or vomiting. This is alarming, but is often immediately relieved with warm spiced toddy, peppermint, or capsicum and whiskey, and he is prepared to pass the day as he did the last.

In other diseases, palliatives are often found the best cures. Those medicines which relieve pain, and soothe the uncomfortable feelings of the patient, are sometimes admirably adapted to subdue his disease. Not so with the intemperate. Nothing so quickly relieves his anorexia, his gloomy feelings, and his gnawing pain, as the stimulating draught; but the relief is only temporary, and the remedy ultimately, by its indirect effects, increases all the symptoms of his disorder. The class of tonics, particularly bitters, with or without wine or spirits, so often prescribed in dyspepsia, I consider liable to the same objection. No method can be more certainly calculated to produce habits of inebriety than a long course of vegetable tonics in spirituous menstrua. Such prescriptions may give us a mushroom popularity, but by them we do our patients incalculable injury.

In every intemperate man there is an immutable association in his mind between stimulating liquors and the relief they afford to all the unpleasant sensations which I have described as forming his disease. To him the bottle is a catholicon; it relieves anorexia, gastrodynia, flatulence, nausea, vomiting, colic, and those gloomy feelings which are worse than all. It produces an instant change from pain to pleasure, from despair to hope, and transforms this thorny, rugged wilderness of a world into a paradise. In vain do we prescribe temperance to such a patient. He suffers what those who have not had his disease to the same extent cannot conceive. But his remedy is at hand, and he flies to it as to the only consolation left him. To cure him we must break up this association, and convince him, by actual sensations, that his remedy has lost its effect. We must likewise change the action of the stomach, and restore it to its healthy standard.

Some eight or ten years ago I read an anecdote by Dr. Rush, of his having cured a negro man of a taste for spirits by the use of emetic tartar. Similar facts are familiar to the profession, and it required no great powers of divination on the annunciation of Chambers's nostrum, and its effects on drunkards, to pronounce its active ingredient to be the tartrite of antimony. That remedy which can produce nausea, vomiting and purging, is no other than emetic tartar. But these are not its only effects. Possessing no positive taste itself, it communicates a disgusting quality to those fluids in which it is dissolved. I have often seen persons, who from taking our medicine in the form of vinum ant. could never afterwards drink wine. Nothing, therefore, seems better calculated to perform our indication of breaking up the association in the patient's feelings between his disease and the relief to be obtained from stimulating liquors. These liquors, with the addition of a very small quantity of the tartrite of antimony, instead of relieving, increase the anorexia, and quickly produces in the patient an indomitable repugnance to the vehicle of its administration.

I may be permitted here to remark, that while I claim no credit for originality in the application of our remedy, I had used it in this disease for some time before I saw the analysis of Chambers's remedy for intemperance by the Committee of the New York Medical Society. My method of prescribing it has varied according to the habits, age, and constitution of the patient. I give it only in alterative and slightly nauseating doses. A convenient preparation of the medicine is 8 grs. of tartrite of antimony dissolved in ℥iv. of boiling water—℥ss. of the solution to be put into a half pint, pint, or quart of the patient's favourite liquor, and to be taken daily in divided portions. If severe vomiting or purging ensue, I should direct laudanum to allay the irritation, and diminish the dose. In every patient it should be varied according to its effects. In one instance in a patient who lived ten miles from me, severe vomiting was produced, more, I think, from excessive drinking than the use of the remedy. He recovered from it, however, without any other bad effects. In some cases the change suddenly produced in the patient's habits has produced considerable lassitude and debility, which was of but short duration. In a majority of cases no other effect has been perceptible than slight nausea, some diarrhœa, and a gradual but very uniform distaste to the menstruum.

In answer to the question, will it always cure? my experience does not enable me to give a positive answer. That it will always when fairly tried, produce a temporary benefit, I have no doubt. I have as little doubt that the remedy in the hands of intelligent medical men, judiciously administered, and cautiously persevered in, will do more to eradicate intemperance than all the merely moral causes which can be brought to bear against the practice.

I fully agree with the Committee of the New York Medical Society, that such a medicine as Chambers's remedy for intemperance in popular practice must be attend with danger. Drunkards, more than any other class of men, are subject to chronic inflammations of the viscera; and, under such circumstances, powerful doses of the tartrite of antimony may do much mischief. Yet, even in these cases, we often prescribe the remedy in very minute doses, with manifest advantage. In a majority of drunkards, I should apprehend no very serious consequences from emetic doses of the medicine. But this I do not think is the best method of administering tartar emetic, when we wish to change the morbid action of the stomach which solicits inebriation. It is an excellent maxim in medicine, that "chronic diseases require chronic cures," and it is probable that alterative doses of emetic tartar, administered in spirituous menstrua, will be found the best means of not only creating a distaste to spirits; but of removing those perverted actions of the stomach, which create so perilous a demand for the intoxicating cup.

Shelbyville, Tennessee, March, 1828.

ART. V. *Case in which Milky Urine was voided, terminating fatally in Tubercular Consumption.* By GEORGE W. STEDMAN, M.D. of St. Croix, Member of the Medico-Chirurgical Society of Edinburgh, and formerly President of the Royal Medical Society of Edinburgh.

TOWARDS the end of June, 1827, Thomas, a coloured lad about twenty-six years of age, was attacked with pain across the loins, and over the region of the kidnies, also with great weakness, and his urine exactly resembled thin milk in appearance. He was ordered to apply sinapisms to his sides, to use the tepid bath, and to take a dose of ten grains of Dover's powder every night. Under this treatment continued for several days, he seemed to get a little better, but the urine still continued of the same appearance.

I saw him for the first time on Monday, July 9th, (he had been previously attended by my father,) when I found him labouring under the following symptoms:—Pain across the loins, and over the region of the kidnies, increased by pressure—greater pain over the right than the left kidney—some numbness in both thighs, but greater over the left thigh—tongue clean, appetite and digestion good—skin cold—complains greatly of weakness, and is unable to work; his trade is that of a mason—his urine is white, and exactly resembles thin milk. It has an urinous smell, though not strong.

July 10*th.* I cupped him over both kidnies, but did not procure above five ounces of blood. He complained of great pain on the application of the cupping-glasses, but after the operation was finished he declared that he felt his sides easier.

As it appeared to me that chronic inflammation was going on in the kidnies, I directed him to apply two blisters to his sides as soon as the wounds of the lancets were healed, also to drink plentifully of an infusion of flaxseed and cream of tartar, and to take five calomel pills every other night, until he had taken fifteen. I procured a portion of the urine, and tried the following experiments on it, chiefly with the view of observing if it contained much albumen and gelatin, as the disease seemed to bear some affinity to one described by the celebrated Dr. Prout, which he calls a case of chylous urine, and which he considers as chiefly depending on the presence of albumen. As I have not got Dr. Prout's book, I have been obliged to trust to the scanty information concerning it, that may be gleaned from a review.

1st. The first experiment I tried was to heat some of the diseased urine to the boiling point. A white flocculent deposit, about equal to half the quantity employed, took place. Upon allowing it to cool and settle, the deposit gathered in the bottom of the glass, while the supernatant fluid, though still somewhat whitish, had a more yellow hue than the milky urine.

2d. As this might in part be "phosphate of lime thrown down by the ammonia resulting from the decomposition of urea,"* I decanted off the supernatant fluid as well as I could, and added to the thick residuum some muriatic acid. A fluid was immediately formed, while the albumen remained coagulated at the bottom of the glass.

3d. To a portion of the diseased urine I added a saturated solution of corrosive sublimate. This, after an hour, produced a copious white deposit, leaving the supernatant fluid thinner, but nearly as white as before.

These three tests seem conclusive of the presence of albumen.

4th. To a portion of the diseased urine I next added a strong solution of galls strained, (the proportion of ℥s. of galls to a pint of water.) This immediately threw down a copious flocculent precipitate, equal to about two-thirds of the urine employed. The supernatant fluid was thin and yellowish. As tannin precipitates albumen as well as gelatin, this test is not absolutely a proof of the presence of gelatin.

July 17th. My numerous avocations prevented me not only from continuing the experiments, but from seeing the patient again until this day.

He declared that he felt much relieved soon after he was cupped. The blisters were not applied until Saturday the 14th. They afforded him still further relief, and rose well. He says that he only feels the pain when he stoops; he had taken all the calomel pills; his bowels were moderately open. His pulse is quick and strong, but his tongue is clean, and his skin cool. His countenance is better—urine still white. I directed him to continue to drink of the flaxseed and cream of tartar, and to take a calomel pill every morning and evening, slightly to affect his gums.

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* Henry's Chemistry, vol. 2d, p. 439.

The quantity of urine he makes is about ℥lv. in twenty-four hours. He rises once every night for the purpose. This cannot be considered as a very great quantity, when we reflect, that according to physiologists, an adult in good health will make between three and four pounds in the course of twenty-four hours.

Another symptom of diabetes, the voracious appetite is wanting. He says that he relishes his food as much as ever, but that he does not feel any extraordinary degree of appetite. He does not seem to labour under any of the symptoms of indigestion.

24th. Since my last visit he has been progressively improving. His urine is less white than it was; it has lost in a great measure the milky appearance, and is assuming a yellowish hue. It has more of a urinous smell also.

The blisters having nearly dried, were kept open by blistering-plaster. Tongue clean, mouth not yet affected by mercury, though he has been taking the pills—pulse still quick and strong—countenance less thin—eye livelier. He says he feels altogether better. Treatment continued.

31st. Blisters at last allowed to dry—pain entirely gone—gums begin to be affected—skin and pulse natural—appearance good—countenance lively—urine natural and yellow. Ordered beverages of cold infusion of gentian, chamomile, &c.

About a week after this period he went out to work of his own accord, and continued well for nearly two months, when his old complaint again returned. He was again cured by following the same plan, except that he was not cupped, and took less mercury. He again recovered and went to work, at which he continued until about Christmas.

The latter part of November, and the whole of December were cold and damp, and there was a good deal of wind from the north and north-east, accompanied by frequent showers. This state of the weather probably affected him, for about this time he began to complain of pain in his chest, and cough. Blisters were applied and kept open, and as his pulse at the same time was rapid and strong, digitalis was given. Notwithstanding these remedies, he continued to grow worse; his cough increased; he began to spit a purulent matter, and he evidently became thinner and weaker every day. Under these circumstances it was thought adviseable to send him to the neighbouring island of St. Thomas, to try the effects of a change of air. His complaint at this time was altogether pulmonary, and his urine was of a natural colour and consistence.

He went to St. Thomas in the month of January, 1828, but continued notwithstanding to get rapidly worse. He returned to Santa Cruz on the 13th of March, and died next day. I opened him on the 15th.

Dissection.—His body was excessively emaciated. The lungs throughout their whole substance were studded with small tubercles. These were further advanced in the right lung, many of them being about the size of peas, and filled with a thick caseous matter, that could easily be squeezed out. Though much gorged with blood, the lungs floated in water.

The mucous membrane of the stomach was very red and corrugated at the right extremity or *cul de sac*, and towards the *pylorus*, exhibiting the most unequivocal marks of chronic inflammation.

The *pancreas* was enlarged and hardened.

The *liver* seemed larger than natural, though its substance was not diseased.

The *right kidney* adhered so strongly by thickened cellular substance to the peritonæum that it could not be separated from it without great difficulty.

It was of the right kidney that he chiefly complained, and this appearance is a strong proof of inflammation in that organ. The substance of the kidney was firmer than usual, and there were several tubercles, varying in size from a pin's head to a pea, scattered through its substance. In the left kidney only a few tubercles were seen.

The disease I have now described has been frequently seen in this island, and in many cases does not prove fatal. I know the case of a gentleman, who after leaping from a great height, was seized with an acute pain over the region of the kidnies, which confined him to bed for many months. Soon after the accident he began to pass urine of a milky colour, and has done so ever since at intervals, especially after any unusual exertion. He was formerly an extremely strong and athletic man, but since the accident he has been of a very weak habit of body.

Can this disease be considered a species of diabetes? If so, may it not be called DIABETES LACTEUS?

MORGAGNI details a case in which milky-like urine was passed, Epist. 42, § 13, but this arose from calculi in the kidney and bladder, and therefore cannot be considered as at all analogous to the present case.

St. Croix, West Indies, April, 1828.

Art. VI. *On the Use of Blisters in Threatening Abortion, in Leucorrhœa, and in some Uterine Hæmorrhagies.* By Samuel Jackson, M. D. of Northumberland.

THE empirical sect, says the elegant compiler of Roman physic, were accustomed to argue, that medicines were not invented by ratiocination, but, being once found, the reason was sought. *Repertis deinde medicinæ remediis, homines de rationibus eorum disserere cœpisse: nec post rationem, medicinam esse inventam; sed post inventam medicinam, rationem esse quæsitam. Celsi l. i. De* Εμπειρικους. This age of physic is now happily passed away, and the collective reason of all former generations, is rendered subservient to the invention of remedies. Hence it was foreseen by the prophetic genius of Rush, that the time would come, when a student's labour would be as much expedited by *principles in medicine*, as that of children now is in learning to read by the help of an alphabet, instead of single or Chinese characters. It was an implicit reliance on the truth of this great man's propositions concerning the free use of reason in medicine, that first emboldened us to apply blisters for the purpose of preventing abortion.

Case I.—The wife of Colonel J. of Sunbury, a village two miles south of Northumberland, we found on our first visit, May, 1813, covered with a copious crop of measles; hard, dry cough; frequent puking, or violent efforts to puke; continual severe pain in her back; frequent and regular pressing labour pains; some little of the leucorrhœa nabothi; hard, frequent pulse; considerable fever with dry skin. She was six months advanced in pregnancy, and excessively alarmed lest she might miscarry and be thereby brought into danger. The *os uteri* was not open, and therefore an effort was to be made to quiet the pains. She was bled largely, perfect rest enjoined, and we presume that opium was given, but cannot certainly recollect, nor is it material to our present purpose, as may be seen in the sequel. A blister was forthwith placed on her breast, and, at the same time, one on her back, as low down as possible.

The next morning we found her very comfortable, both in body and mind; the pain in her back had gradually subsided as the blister drew, and so certainly was her relief derived from this remedy, that she said, it had "absolutely charmed away the pain." She had no return of it whatever, she was soon well, and went her full time without further trouble. No person could be more delighted with a remedy; she considered it as having been the safety both of herself and her child.

So reasonable did this method of treatment appear, and so clearly indicated by the exigencies of the case, that we did not know for several weeks, being then rather a novice in practice, but that it was in common and systematic use. Whether we learned it from conversation, from books, from lectures, or whether the indication arose spontaneously, on contemplating the necessities of the case, we certainly do not know. We cannot recollect having seen it recommended in books, and therefore venture to obtrude some notice of it on the numerous readers of this Journal. Though we have often used it with decisive advantage, and never with any attendant evil, or, in any case, without complete success, yet we have been principally moved to publish this notice at the present time, by its decisive effect in the following instance.

CASE II.—About two months since, we were sent for to visit the wife of P. L. in Sunbury, but not being able to attend for some time, we found, on arriving at the house, that our friend, Dr. PRICE of that town had been called. The patient, in the sixth month of her pregnancy, had made a misstep the day before, from which she suffered some pain in her back during the whole night; in the morning she walked out, but found herself worse for it, and, upon returning home, she was seized with bearing pains, followed by such a discharge of water as led her to suppose that the membranes were ruptured: the pain increased, with frequent gushes of water, and by the time Dr. Price had arrived, it was excessively violent, coming on at regular intervals of about five minutes and reaching down the thighs; she had also a severe strangury which obliged her to rise frequently and pass a few drops of urine with great pain. Dr. P. had directed an enema of laudanum, half an ounce, which she had retained without any alleviation, though at least an hour and a half had now elapsed.

The *os uteri* was, as we believed, a very little patulous, there had been some sanguineous show, and after the most careful inquisition, we presumed that the membranes had given way, and the water passed off. The uterus was in its proper site, the pains did not seem to affect it very considerably, and therefore even if abortion were to be considered as finally inevitable, these were not the proper pains to produce it, and hence they were to be subdued if possible. Her pulse was too feeble to admit of bleeding, and moreover she was of a peculiar constitution, and seldom profited by the loss of blood. Solid opium was now given in doses of five grains, with the hope that in conjunction with the enema already taken, it would subdue these pains and prepare the system for the supervention of genuine labour. But these potent doses produced very partial, and only temporary relief, and did not fail to bring on severe vomiting, which always renewed the pressing pains. Two indications therefore arose—to subdue the pains, and to compose the stomach. The black drop and paregoric elixir she abhorred, and hence we continued to give solid opium by the stomach, and laudanum by injection; but no sooner did the pain abate under these anodynes, than a dreadful vomiting ensued, which constantly renewed it. We endeavoured to keep the system under the steady influence of opiates, being careful to administer some as soon as the effects of the preceding dose began to subside into languor and sickness; we tried to compose the stomach with ether, elixir vitriol, lupuline, ginger tea, an article we have found of great service in the nausea left by opium. But all these applications were vain; either vomiting or pain, and sometimes both, were contiually present, and the state of the poor suffer was truly alarming. We must confess that in such a case the acetate of morphia, or the denarcotised laudanum ought to have been used, but we had rather unjustifiably neglected to procure these articles, having always found an acetic preparation on the principles of the *black drop*, to answer as a succedaneum to common laudanum.

Here let us observe that we should have applied a blister to the lumbar region at first, had it not been that we looked upon abortion as inevitable, and considered that genuine labour would soon supervene. But now, after a struggle of two days and nights, without any advantage being gained, we proposed to our colleague the application of a blister, and he readily consented, though he acknowledged the practice to be entirely new to him. Just in proportion as the plaster drew, the pain receded, and was felt no more after the blister was fully drawn. So complete was the cure that a tremendous fire the following night, which suddenly consumed a large wooden barn within twenty perches of her house, and alarmed her excessively, did not renew the pains. Even the strangury was entirely removed by the blister, and did not return. She has continued well ever since, and she now feels the fœtus as vigorous as before. She was of opinion that at least half a gallon of water was gradually discharged in the course of the first two days. That the liquor amnii may pass off, and the fœtus survive, is probably incontrovertible, but it certainly occurs so seldom as to be justly considered a very rare exception to the general course of things. That it occurred in this case we cannot by any means aver; the lady may have been deceived in the quantity passed, and the water may have come from one of those collections which authors describe as sometimes existing between the membranes.

It might hence be presumed that blistering the back would prove a useful remedy in preventing habitual abortion, but we have tried it in one instance only. Mrs. W. our near neighbour, miscarried with her third child in the summer of 1826. She had gone to her seventh month, and for two months previous she had been troubled with frequent slight hæmorrhagies, with pain in her back. These were removed by venesection, rest, and opium; but they were followed by a debilitating discharge of a thin, acrimonious, fetid fluid. This again was cured by a topical bath of cold salt water, assisted with bark and wine. She had each of these diseases three or four times alternately before abortion took place, but as she was a very delicate, nervous woman, and greatly alarmed at the mere suggestion of a blister, it was thought best to omit this remedy.

Her labour was attended with copious flooding, and she continued in a state of debility for at least eight months, with pain in her breast and weakness of her back, with frequent little hæmorrhagies, which were succeeded by an offensive, ichorus leucorrhœa. But bark with iron, and frequent blisters to the back, which she now submitted to with fortitude, restored her so far that her catamenia returned in the spring, and she forthwith became pregnant. Towards the fifth month, however, her old complaint of hæmorrhage with pain in the back returned, and threatened to prove as troublesome as before; but having now learned the comfort to be derived from blisters, she had one drawn, and it afforded immediate relief. The complaint returned three times, and each time was removed by the blister alone; even venesection was dispensed with in consideration of her peculiar stamina. During her last month she was troubled with frequent bursts of water, and as we presume, of the *liquor amnii*, but she went her full time, and was delivered of a healthy child. Her troubles, however, did not end even here, as her old complaint, the fetid ichorous leucorrhœa, returned in a few weeks. This was soon cured by a blister, aided by the topical bath of cold salt water, and the former invalid now enjoys excellent health.

Let no one suppose that we produce this remedy as one that is applicable to every case of abortion, or as one that must infallibly succeed, even in promising instances; the intelligent reader can easily call into mind the various circumstances which must render this, as well as every other preventive, utterly useless, and even inapplicable.

It has been said that blisters are to be avoided as far as possible in all cases of pregnancy, because they are particularly apt to produce strangury in this state of the body, an affection that might be attended with dangerous consequences. But we cannot forbear asserting, that we have never hesitated to apply them on account of pregnancy, and that we do not recollect having ever seen a strangury from them under such circumstances. This exemption may be owing to the care we have very generally had of giving parsley tea or some diuretic during the whole time of their drawing. Last summer a lady in the ninth month of her pregnancy, suffered severely with œdematous legs, and having heard of blisters in such cases, she proposed the remedy herself; we tried to dissuade her from using them, but she did it clandestinely, and had great cause to rejoice in her temerity.

In *leucorrhœa* a blister is generally our first remedy. We prescribed it with success when a student of medicine, sixteen years ago, and never failed to profit by it since. Nothing can possibly be more consistent with all the known principles of medicine, nothing more *physiological*, nothing more agreeable even to the intuition of ignorance; it removes the internal inflammation, diverts the humours or rather the irritation, into another channel, and thus affords an opportunity for the just operation of local and general tonics. We are therefore surprised to find it so little known that we do not recollect any writer who mentions it, except Dr. CHAPMAN in his therapeutics, and to him we presume it is rather a new medicine, as he does not notice it in his edition of Burns. We have sometimes used a repetition of blisters, sometimes maintained a discharge for many months with savin cerate, and not unfrequently have directed cups to the back in the intervals of blistering. All these methods may be tried in succession, and as we venture to predict, with great success.

In this disease there is always some irritation in the uterus or vagina, the effect of cold, of external violence, of metastasis, of repelled discharges: this irritation ought to be diverted forthwith from the mucous membranes, and this indication may often be fulfilled by bleeding at the arm, by a dose of salts, by rest with refrigerant diet, and by various other gentle means. But here lies one of the misfortunes of physic; the practitioner is seldom called till the discharge has actually taken place, or even continued for weeks or months. And here by the way we cannot refrain from observing that this is one of the innumerable instances in which nature does nothing but mischief. An inflammatory state of the whole system from cold or from some violent concussion of the body, is quickly attracted to the lumbar region, the weak part in many women; this would soon wear itself out, or might be removed by the gentlest means, but *nature*, not being *medicus expectans*, throws it on the uterine system, and thus establishes a disease, which, with its consequent predisposition, is apt to prove an occasional trouble to the poor woman all the rest of her life. This is one of the works of *nature*.

The disease is very generally preceded by pain in the back, with a sense of weight about the pelvis, and a febrile state of the whole system: now, if patients who are subject to the disease would attend to these premonitions, and take rest in a recumbent posture, use blisters or cups, a saline purge, low diet, the mucous secretion might be anticipated, the irritation diverted to the skin, and the lining membrane be thus prevented from acquiring the habit of discharging the general disease. All tonic injections are too often useless, and are sometimes dangerous by throwing the disease on some internal part, and it is rather a hopeless business to attempt a cure through the medium of the stomach, unless this organ with the whole system be clearly in a state of pure unirritated debility; hence in patients who are not yet broken down, we seldom use any other tonic than a profusion of cold salt water to the affected region. It is always some comfort to save the stomach and to cure by remedies directly applied; we then know their efficacy with the same certainty that we do the operation of a knife or cautery. The great utility of counter-drains has been known since the days of HIPPOCRATES, and we must confess they are a very favourite part of our private apparatus. In our early practice we were possessed of a strange prejudice to the use of compression in the treatment of ulcers, and therefore often established an issue in their vicinity which was constantly found to promote the cure; and even now, when we use compression with the utmost freedom, and can join most heartily in its commendation, we sometimes find a savin cerate issue to expedite the healing process, and to prevent those eruptions which occasionally take place under the bandage.

We cannot quit this subject without adverting to one point in the treatment of leucorrhœa, which, if neglected, may lead an incautious practitioner to discredit the blister as well as every other medicine. There may be an organic disease of the uterus or vagina, and therefore we ought, before prescribing any remedies whatever, to make a careful examination. In one case of our early practice, we used blisters for several weeks, but, upon examination, the incurability of the disease was found to depend on a fatal cauliflower excrescence. In another case, the woman had been attended by several physicians without any relief, and was nearly exhausted by a long-continued discharge; upon examination a small polypus was found, which being removed, the patient soon recovered her former health. These cases are not offered as new, but merely as useful reduplications which cannot well be omitted in the course of composition.

From the well known effects of blisters in arresting slow internal hæmorrhagies, they might be expected to afford relief in the discharge which has obtained the absurd name of *menorrhagia lochialis;* but we have never been under the necessity of testing them in this disease. In a few cases, however, in which there was a profuse and fetid leucorrhœa for some weeks after delivery, this remedy, as we have hinted above, has often afforded immediate relief. In one instance, a single blister performed a permanent cure, and in no case did a second, third, or fourth application fail of eradicating the disease.

Professor Chapman, in his edition of Burns, recommends a blister to the sacrum in dysmenorrhœa; and this we are induced to mention, because we have not found this remedy noticed by any other authority. We have not tried it, having always succeeded pretty well with paregoric elixir and camphor; but it appears so rational, and comes from such high authority, that we could not fail to use it with as much confidence as we give jalap to purge or ipecacuanha to excite emesis. Nor can the intelligent reader fail to derive from it, an argument in favour of the practice here recommended in other diseases of the uterine system. In the mean time, however, we have some suspicion, that, in dysmenorrhœa, the blister may have fallen into disuse, since we find that Dr. Dewees does not notice it in his system of midwifery, at least not in the second edition. It is true that in many cases of this disease there is a morbid membrane which must be cast off at the expense of some pain, and here a blister might prove an interruption to the salutary process; but, again, it might be inquired whether cupping and blistering, in the intervals, would not be likely to eradicate the disease which forms this preternatural substance. Dr. Chapman states, however, that there is a great aversion to having epispastics applied to this part in private practice; we have certainly not found this to be the case in our own circle.

Dr. C. also recommends this remedy in *amenorrhœa*, and surely a more promising one cannot be found for this troublesome disease; but particularly for that form of it which is called *suppression*, as this is probably often attended by some local disease which the blister may remove.

There is yet another uterine affection for which we have used epispastics with decided advantage; we mean that abnormal state of the genital organs, which often takes place before the entire cessation of the menses. In these cases, if the system be pretty robust, this remedy will hardly ever be necessary, as bleeding from the arm and other antiphlogistic means will amply suffice; but when the patient is sinking into chronic debility, with too frequent or too copious hæmorrhagies, it is necessary to seek for other relief. When a woman feels the complaint impending, a few cups or a blister with rest in a horizontal posture, will avert the various evils of flooding and of all its customary remedies, as sugar of lead, cold applications long continued, digitalis, large doses of opium, as recommended by Professor HAMILTON, all which tend to break down the constitution of the unhappy patient, and to lay the foundation of permanent debility and broken health. Even when the discharge has actually commenced, if it be yet very moderate, and there be no organic affection, the cups or a blister, or both in succession, will, according to our limited experience, prove the most safe and certain remedies. Dr. Dewees speaks of dry cups to the back and blisters to the thighs. We presume that the scarificator will afford an additional relief, and the blisters be found more efficacious if applied to the back. It has just occurred to us, however, that dry cups may be applied when there is no skilful person to use the cutting instrument. In every neighbourhood, some of the good women ought to be instructed to perform the operation of cupping.

Patients must be very greatly debilitated to admit of tonics during the presence of these hæmorrhagies, nor can any of the more powerful ones be given in the intervals. If the disease can be diverted from the uterus to the back, and thence attracted out of the body, the constitution will recover through its own energies; or if it prove unequal to this task, the appropriate tonics can be given with more safety, in consequence of the existing issue. We lately read some author who directs that cold chamomile tea be given freely during the intervals; either this writer has discovered some new property in the medicine, or the experience of others must be set at nought. We have known it to increase the discharge, and even the good women themselves are apprised of its emmenagogue properties. HEBERDEN says, that it undoubtedly possesses this virtue with respect to particular women, for he has known more than one in whom it always brought on some degree of hæmorrhage, at whatever time of the month it was taken. *Comm. Chap.* 62. We fear that very many tonics have the same effect in these particular cases; and hence we have presumed, that, while the general system is under their corroborant influence, their evil effects on the uterus may be diverted to the back, and conveyed out of the body. The health and strength thus acquired by the system generally, cannot fail of imparting to the uterus its proper proportion. As far as we are authorized to speak from experience, it is presumed that a small blister kept open with savin cerate for many months, is the most useful drain in these cases. If it be properly managed, and run freely, it gives very little uneasiness, and this little is more than balanced by the comforting security it affords.

We do not pretend that cases occur very frequently in which such apparent severity of treatment is necessary; but some patients we have seen, who, having been unavailingly treated with astringents and tonics, were sinking into dropsy, but were soon restored to health by the means here recommended.

We are not unaware that issues have latterly fallen from their just rank; but this has not happened so much from a change of theory as from our neglecting to theorise with sufficient freedom. Almost all physicians, from HIPPOCRATES to the time of HOFFMAN, were more or less infected with the doctrines of the humoral pathology, and supposed that morbid matters were attracted from all parts of the system by these artificial emunctories; but now, when such extravagances of this doctrine have been justly exploded, there is still a most powerful reason for the use of issues, altogether independent of that derived from experience. *Irritation* is more certainly diverted from its morbid course than humours, and is more completely under the influence of a mysterious attraction, than acids or alkalies, poisons or febrifacient miasmata diffused in the mass of blood, were even supposed to be, by any disciple whatever of the older pathology.

ART. VII. *Experiments on the use of the Cupping-glass and Ligature in Poisoned Wounds.* By ARISTIDE RODRIGUE, M. D.

THE preceding number of this Journal contains some highly interesting observations and experiments on the efficacy and modus operandi of cupping-glasses, in preventing and arresting the effects of poisoned wounds, showing that their action does not depend upon the removal of the atmospheric pressure. The subject has created such general interest, and is of so much importance in a practical point of view, that the following experiments, instituted about the same time that Dr. PENNOCK was engaged with his, will probably be thought worthy of publication. The poisons that I employed appear to have been more active preparations than those used by Dr. Pennock, and our experiments differ in my having employed the ligature, principally to counteract their effects; our results however, coincide perfectly.

My first investigations were made with the view of ascertaining the strength of the poisons, and from these it appeared that two grains of strychnine, deposited in the cellular tissue on the outside of an animal's thigh, would destroy life in about five minutes; and that one drop of concentrated prussic acid applied in the same manner, produced the same effect in from ten seconds to one minute; so concentrated indeed was the acid, that even the inhaling its fumes was sufficient to throw the animal into violent convulsions, and destroy life.

The following appear to be legitimate conclusions, from my experiments.

1st. A vacuum caused over a part under which a poison has been deposited, will prevent such a poison from producing its usual effects so long as this vacuum exists.

2d. All constitutional symptoms immediately disappear on the establishment of a vacuum over the poisoned surface, and by removing the poison by an incision, the life of the animal may be saved, provided too great a quantity be not previously absorbed.

3d. The glass does not act by extracting the poison, as may be seen from the experiments with strychnine.

4th. The ligature, and the glass not exhausted, are equally as effectual, in cases of poisoned wounds, as the exhausted glass.

Experiments 10th, 11th, and 12th, with prussic acid, and 5th with strychnine, show, that by alternately relaxing, and tightening the ligature at intervals, an animal into which a poison has been introduced, may be alternately affected and relieved by permitting the poison to be absorbed by degrees; the quantity absorbed, being too small to destroy life, is so changed by the fluids, that the system, which possesses the power, either of discharging or decomposing it, does not sink under its effects.

Nearly the same was observed with the cupping-glass, (see Experiments 8th, 15th, and 16th,) but the ligature possesses this advantage over the glass, that of allowing the more gradual introduction of the poison, and, besides the powerful irritation produced by the ligature, may also have a tendency to counteract, in some degree, the effects of the poison.

It will also be seen, from Experiments 17th, 18th, and 19th, that prussic acid does not act upon the system through the medium of the nerves.

The following experiments were performed in the presence of Drs. Robinson, Finley, and many other gentlemen, with prussic acid, prepared by distilling prussiate of mercury in a small glass tubulated retort with muriatic acid; a glass tube intervening between it and the receiver. The first part of the tube was filled with carbonate of lime, to prevent any muriatic acid from passing over; the other part contained dry muriate of lime, to absorb the moisture. The receiver was placed in a mixture of ice and salt, and the acid passed over into it by a moderate heat.

The first two experiments were made principally to test the strength of the acid.

Experiment 1st.—A small incision was made on the outside of a full grown rabbit's thigh, and a single drop of the acid introduced into it. In ten seconds, violent convulsions came on, attended with profuse discharges of urine, fæces, and saliva. The muscles of the thorax, and larynx especially, were much convulsed, occasioning great difficulty of respiration. The rabbit died in one minute after the application of the poison. In this case, and indeed in all the others, one of the first symptoms of the action of the poison, was an extreme dilatation of the pupils.

Experiment 2d.—One drop of the acid was applied to the tongue of a full grown cat. It was immediately placed on its feet: in fifteen seconds it fell on its side, convulsed, and died in one minute after the application of the poison, with all the symptoms enumerated in Experiment 1st.

Experiment 3d.—A full grown rabbit being properly secured on the table, one drop of the acid was introduced under the fascia, on the outside of the thigh. In fifteen seconds, symptoms of convulsions appearing, a piston cupping-glass was applied over the wound; the convulsions ceased almost immediately, and the breathing became more natural. In ten minutes it sat up, and eat of some cabbage leaves which were placed before it. The cup now accidentally fell off, and the convulsions immediately returned, but were again removed by the reapplication of the glass. Being absent for about half an hour, on our return we found the glass had fallen off, and the rabbit dead.

Experiment 4th.—This was a very young rabbit; it died in ten seconds after the application of the poison to the thigh, as in the above experiment, and before we could apply the cup.

Experiment 5th.—A drop of the acid was applied, in like manner, to the thigh of a full grown rabbit. In twelve seconds convulsions came on, but were speedily relieved by the cupping-glass: in five minutes it began to walk about the table. It was now placed on the floor, ran about, with the glass attached to its thigh, and ate freely of some cabbage leaves. At the end of two hours the cup was removed, and the wound washed. Three hours afterwards, when it appeared perfectly well, we permitted it to inhale the fumes of the acid, and it died.

Experiment 6th.—This was the fellow of the rabbit mentioned in Experiment 4th: it died in twelve seconds, before we could render it any assistance.

Experiment 7th.—In this experiment, a small piece of the muscle on the outside of the thigh was removed, and the acid placed in contact with it: the cup was applied before any symptom showed itself. The animal appeared perfectly well; but, in about twenty minutes, while we were engaged in the following experiment, the cup fell off, and before it could be reapplied the animal died.

Experiment 8*th.*—This was a full grown rabbit. The acid was applied in this experiment on a wounded muscle, as in experiment 7th, the cupping-glass, however, was not applied until convulsions came on, which the application suspended immediately; the cup having remained for fifteen minutes, we wished to see if by removing it the convulsions would return; we found that the cup had been off but a few seconds, when the animal fell on its side violently convulsed; but the reapplication of the glass again relieved it. We continued alternately removing and applying the glass for a considerable time, and the animal was successively affected and relieved; and in three quarters of an hour the animal was perfectly restored.

Experiment 9*th.*—The acid was applied to this experiment under the fascia of the leg below the knee; a ligature was placed above loosely, in order to be tightened at pleasure; as soon as convulsions appeared the ligature was firmly drawn; twenty minutes after, the ligature being removed, convulsions returned, and before it could be reapplied the rabbit died.

Experiment 10*th.*—A drop of acid was applied in the same manner as in experiment 9th, and a ligature loosely placed above the knee; as soon as convulsions appeared the ligature was tightly drawn, and allowed to remain so for five minutes; it was then relaxed; and in twenty seconds convulsions returned, but were again arrested by tightening the ligature; this process of alternate tightening and loosening the ligature was continued for at least an hour. At the end of which time it was removed; the animal appeared recovered, and was set at liberty. Two hours after it was perfectly well.

Experiments 11*th and* 12*th.*—These experiments were repetitions of experiment 10th, and were attended with similar results.

Experiment 13*th.*—To test the strength of the acid a drop was placed on the tongue of a small cat: in one minute it died in convulsions.

Experiment 14*th.*—A wound was made on the outside of a kitten's thigh, and a drop of the acid introduced; immediately after pressure with a glass, not exhausted, was made around the wound; the cat died in three minutes in convulsions. In this experiment the pressure around the wound was *unequal.*

Experiment 15*th.*—The acid in this experiment was applied as in the above; immediately after *equal* pressure was made around the wound by means of a glass not exhausted. In the course of this experiment, the glass was frequently removed, so as to allow the poison to enter the system gradually. In forty minutes, the animal appearing well, was destroyed by a second application of the poison.

Experiment 16*th.*—This was a repetition of experiment 15th, and was attended with the same result.

Experiment 17*th.*—I laid bare the crural nerve in a cat two months old, and separated it from the surrounding parts for near one inch and a half. A piece of tinfoil was placed underneath the nerve, and the acid frequently applied; in two minutes symptoms of convulsions came on; in six minutes were at their height; and in fifteen minutes the animal recovered. In this experiment a little cellular membrane adhered to the nerve, which was probably the cause of the animal's being affected.

Experiment 18*th.*—Having laid bare the right par vagum in a full grown and large rabbit, and carefully stripped it of all cellular membrane, integuments, &c. tinfoil was placed underneath the nerve, the acid was applied frequently for fifteen minutes without effect; in twenty minutes the animal was set at liberty; at the end of an hour it appeared well, and was destroyed by the application of the acid to its nose. Blood drawn from the jugular vein coagulated in five minutes.

Experiment 19*th.*—Laid bare the right par vagum, as in Experiment 18th, and frequently applied the acid without effect; the crural nerve of the opposite side was next treated, as in Experiment 17th. No effect was produced by the application of the acid. I should judge, from the above experiments, that prussic acid has no direct specific action on the nerves.

Experiment 20*th.*—An incision, half an inch in length, was made on the outside of a full grown cat's thigh; two grains of strychnine were introduced in the incision, under the cellular membrane, and the wound closed by a couple of stitches, in one minute the eyes became glassy, and the pupils dilated; in two minutes twitchings of the leg in which the poison had been deposited; in four minutes convulsions came on; in five minutes it died convulsed, passing its urine and fæces involuntarily.

Experiment 21*st.*—The same quantity of strychnine introduced, in the same manner as in Experiment 20th, into a young cat. As soon as it appeared uneasy, the cup was applied, and allowed to remain on one hour; at the end of which time, the cup was removed, the poison taken out, and the glass reapplied and allowed to remain for ten minutes, when it was again removed, the wound carefully washed, and the animal set at liberty. Four hours after it was seen apparently well.

Experiment 22d.—This was a full grown rabbit. Two grains of strychnine were introduced, as in Experiments 20th and 21st. An exhausted cupping-glass was immediately applied; in twenty minutes no effect being produced the glass was removed; and in two minutes the animal fell on its side in convulsions; the glass would have been immediately reapplied, but owing to the valve getting out of order it was not replaced until the animal appeared nearly dead; as soon, however, as the glass was reapplied, its breathing, which had nearly ceased, immediately returned; in fifteen minutes it stood on its legs, and appeared lively; in thirty minutes after, that portion of the skin, immediately in contact with the poison, was sliced off; the wound washed, and the animal set at liberty; in a few minutes it began to run about the yard, and eat grass. One hour after convulsions suddenly came on, and before the glass could be reapplied, the rabbit died.

Experiment 23d.—The same quantity of strychnine was introduced in the same manner as in Experiment 22d, and the animal left to its fate. The animal died in seven minutes. This experiment was made for the purpose of comparison with Experiment 22d.

Experiment 24th.—As in the above experiments, a like quantity of strychnine was introduced in the same manner, and a ligature was placed above the wound, firmly drawn. In twenty minutes, no effect being produced, the ligature was loosened and allowed to remain so for fifteen minutes. When slight symptoms of convulsions appeared the ligature was immediately tightened. In ten minutes after, the ligature was again loosened, and as soon as convulsions appeared, was again tightened. This alternately relaxing and tightening the ligature, was continued for near one hour, when the poison was removed by slicing off the skin in contact with it, and carefully washing the wound. Two days after, I saw the rabbit perfectly well.

Experiment 25th.—This experiment was made for the purpose of comparison with Experiment 24th. The same quantity of poison was introduced as in that experiment, and the animal left to its fate. In four minutes convulsions came on, when the poison was removed with a piece of the skin. The wound was also washed; in ten minutes the rabbit died.

ART. VIII. *On the Medicinal Properties of the Myrica Pennsylvanica.* By WILLIAM M. FAHNESTOCK, M. D.

THE very signal advantages that I have derived from the concrete wax of the myrica in severe dysenteries, and the desire that its properties may be more fully investigated, induce me to offer a few remarks on the article.

Early in the month of July, 1822, the dysentery appeared in Hanover and Paxton townships, of Dauphin county, and continued through the extensive valley of Kittaninny, carrying off its victims with unparalleled mortality. Its violence, and resistance to the common medical treatment, rendered it truly embarrassing and alarming. The distress in some households and sections of the country was almost incredible; whole families and neighbourhoods were, in a very short period, prostrated with the disease, and perished without any relief.

From the year of 1819, fever prevailed annually during the summer and autumn. In July 1822, the weather became excessively warm and dry; vegetation was parched and perishing; and the earth literally baked; during this time the dysentery supplanted the fevers, and continued until after some heavy rains in August, when it disappeared, and intermittents, remittents, and bilious fevers again prevailed.

The disease made its attack very suddenly, generally commencing with violent pain in the stomach and abdomen; restlessness; severe retching, and frequent small evacuations; stools variously mixed, and of different consistence—often bloody, and in some instances nearly pure blood, but generally of a frothy or slimy mucous appearance, resembling the washings of meat, or the sanies of ulceration. Slight fever accompanied the incipient stage, but excitement of the general system increased with the irritation of the bowels, and after a few days was succeeded by prostration, which usually terminated the existence of the patient.

It would be irrevelant to my present purpose to enter into a discussion of the etiology and pathology of the disease, as it would lead me into disquisitions too diffuse to serve any beneficial purpose on this occasion; I shall therefore proceed immediately to detail the facts connected with my experience with the myrica.

Following the practice of SYDENHAM, emetics were administered, under the impression that the disease was of a bilious character, or intimately connected with the fall epidemic, but without deriving the anticipated effects; while, in many instances, they seemed to aggravate the symptoms. Blood-letting was inadmissible, from the weakness of the pulse and prostration of the system. It may be asked, why could not venesection be practical to arrest its progress in the forming stage, as it has been stated that the excitement increased with the irritation of the bowels? To what I have said it is only necessary to add, that the disease was very sudden in its attack, and fully formed before the practitioner was called to prescribe, and the system in such a relaxed state as to preclude it, as was proved by experience. This fact is observed in many epidemics, and the late Dr. RUSH particularly remarked it in his notes on PRINGLE. "The system, not only in dysentery, but in malignant fevers, is sometimes so suddenly and completely prostrated, as not to react after the use of depletory remedies. In these cases life can be saved, only by the powerful stimulants." Leeches I have no doubt would have proved highly beneficial; but in the country, for want of proper attention, we are deprived of those valuable auxiliaries, and have to depend on general means. Cathartics were then chosen—calomel and castor oil—the sulphate of soda—the sulphate of magnesia—and the oleaginous mixture, as gentle purgatives, to procure natural stools, but generally had to be abandoned, and astringents and tonics substituted, to sustain the strength of the system. Calomel in small doses, and the antimonials as recommended by Sir GEORGE BAKER—FAIRPLAY's favourite prescription of ipecacuanha and laudanum—CLEGHORN's union of calomel and opium—AKENSIDE and RICHTER's plan of sudorifics; for which calomel, opium, and ipecacuanha were used; DOVER's powders—JAMES's powders—and the spt. mindereri, with spt. nitr. dulc. and laudanum. The vegetable alkali—the alkali and magnesia with tinct. thebaic.—the cretaceous julep, and even the most powerful astringents, as alum, kino, and logwood. The warm bath —laxative and anodyne injections—fomentations—rubefacients—and blisters, were variously modified, and successively used with varied, but ill success. The much-vaunted stibium specificum, made public by Dr. YOUNG, and known to be the vitrum antimonii ceratum, so much extolled by Sir JOHN PRINGLE, was also tried. The acids recommended by Pringle, and supported by the ancient authority of DEGNERUS and DOLŒUS, were employed; and the vitriolic solution of Dr. MOSELY; as were also ripe acid fruits; not upon the erroneous hypothesis of TISSOT, to neutralize the poison in the stomach, but upon the evidence of their being so successful in restoring the Swiss regiment in the south of France, who subsisted entirely upon grapes; and being a practice partially supported by HOFFMAN, who recommends the Rhenish wine. But fruits and acids, as Dr. Clark justly observes, when continued, I found to bring on a return of the disorder. The nux vomica, agreeably to the prescription of Consbruch,* a German writer of considerable eminence, was used with temporary advantage; it seldom failed to suspend the disease, but, like Bergius, I generally found it to relapse. Failing in this, to which I was much prepossessed by its success with Hagstrom in Sweden, and the strong commendations of Hufeland, who had an extensive experience of its good effects in the epidemic at Jena, connected with the flattering confirmatory proof of its adaptation to the disease of this climate by my kinsmen, Dr. Samuel Fahnestock of Lancaster, Pa.† I then recurred to mercury, as introduced by Boyle, and subsequently used by Cleghorn, Clark, Bogue, Balfour, &c. to produce ptyalism, which promised a valuable remedy, but required more time to develope its influence than the debility of the patient would endure.

At this conjuncture, baffled with the usual remedies, I was induced to make an experiment with a domestic remedy, on the recommendation of several gentlemen, who had seen its beneficial effects, in our army stationed at Lake Erie, in 1813, where the shrub abounds. On inquiry, I find that it is very much used in dysenteric affections among the common people on the borders of the lake, who procure it for commerce.

The information I have of its first use is entirely traditionary, I therefore cannot vouch for its correctness. Attention, it seems, was first attracted to it at the time the dysentery prevailed so extensively among the soldiers in that vicinity. Several invalids were placed in a small cabin, and restricted to a very abstemious regimen. In the absence of the matron, one of them succeeded in crawling to the closet, and got a myrtle candle, with which he gratified his palate by eating of it, and in a very short time was evidently relieved; then giving it to his companions, they were equally benefited. Upon this result, the concrete wax was distributed to the soldiers, and they speedily recovered.

I am unacquainted with the character the disease assumed on our frontier, yet we have reason to suppose it to be similar to that which usually prevails in armies quartered in low and damp situations, and exposed to great vicissitudes of temperature, and to fatigue.

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* Klinisches Taschenbuch für Practishe Aertze.

† I have since discovered that it is sinking in the estimation of the German writers, who have noticed it particularly, and that L. J. Schmidtman, who used it in the epidemic at Melle, a town in the province of Osnaburg, acknowledges that "it sometimes allayed the pain, though in few individuals it increased it."

At the time I received the myrtle-wax, I had several cases under the ordinary treatment, and I determined to make a trial of it without delay. For this purpose I powdered it, and ordered a tea-spoonful to be given in simple syrup, or mucilage of gum Arabic. In many cases it acted like a charm, and in others, after the repetition of the same quantity, several times, I invariably found the patient improving, and, in a very short period, perfectly relieved. I have a record of upwards of sixty cases, in which it was administered with uniform success, and without a single failure, where a prudent regimen was continued.

A few of the cases I shall here introduce, to give a brief picture of the disease, and the effects of the prescriptions. It is proper for me to state, that I premised its use by calomel in large doses, twenty or thirty grains, and castor oil or the oleaginous mixture, and frequently used the latter alternately with the calomel. I gave this medicine, under the impression that the liver was considerably involved in the derangement of the viscera, with a view to its producing its peculiar impulse to the hepatic apparatus, and to correct its secretions. I must acknowledge, that I not only attach much importance to the use of the calomel, but ascribe many of the beneficial results to its administration. In some cases, where there was much agony, I united a small quantity of opium with the concrete wax, made into pills with mucilage and a few drops of ol. cinnamomum.

Case I.—H. C. A young woman of intemperate and dissolute habits, was severely attacked with the dysentery. It was ushered in with excruciating pain in the abdomen, and she suffered extremely with tormina, and sickness at stomach. Pulse frequent—skin dry—tongue slightly furred—much thirst. Ipecacuanha, as an emetic, was prescribed, and afterwards calomel, gr. xv. to be followed in an hour and an half by ol. ricini ℥j. The cathartic operated, but instead of relieving the patient of tenesmus, it seemed to aggravate the symptoms and increase the inclination to stool. The discharges were frothy, of a mucous consistence, and streaked with blood. I ordered the sudorific powders of calomel, opium, and ipecacuanha. On the following morning, I found the skin still dry, the medicine not having produced any diaphoresis—the pulse weak and flagging—the evacuations more frequent and fœtid, and the system much prostrated. Stimulants were already required—for this purpose, the Columbo was given in decoction, together with a mixture of calcined magnesia and laudanum, and anodyne enemata. An epispastic was applied over the abdomen, and afterwards the extract of Hæmatoxylon Campechianum. These failing to afford relief, the pilula hydrargyri, and the unguentum, were brought into requisition; but the exhausted state of the system forbade persevering in so tardy a remedy: resort was then had to brandy toddy as an incitant. At this state, I received and made the first use of the myrtle-wax. Its happy effects were soon developed by the suspension of the distressing symptoms, and an improvement in her condition. Under a gentle tonic treatment she recovered rapidly; but returning to her former abandoned dissipation, she relapsed, and in despite of every precaution, indulged in large potations of ardent spirits: inflammation spread to the peritoneum, and proved fatal.

Case II.—Mrs. A. who had been labouring under a complication of diseases—umbilical hernia, frequent uterine floodings, but now a few months advanced in pregnancy, and just recovered from a severe attack of bilious fever, which had reduced her to a mere skeleton, became the subject of this malignant scourge. On the 31st of July, I was called to see her again. The disease had made its appearance the evening previous, and she had passed a very restless night; complained of much alimentary distress and severe pain in the abdomen and back; frequent inclinations to stool, and but trifling evacuations mixed with blood. I ordered a small dose of calomel and the oleaginous mixture, which expelled a large quantity of mucus, blood, and indurated fæces. The griping abated somewhat, and the patient was apparently at ease for several hours. In the afternoon, the pain and straining efforts returned, attended with fever. The alkaline mixture with laudanum was given; and early in the morning the myrtle-wax in pills: after which she improved, and, by the aid of tonics, was able in a few days to be out of bed; but very imprudently washed in cold water, and was immediately affected with violent pains in the back and region of the uterus: severe gripings ensued, and large quantities of blood flowed from her, accompanied by grinding pains. Before I arrived, the fœtal membranes had ruptured and the waters discharged. On examination, I found the os tincæ very rigid, and but little altered from its natural state. With the alvine evacuations, large quantities of blood came per vagina, and produced much debility and faintiness. Opium and ipecacuanha, and opium and the acetate of lead, with the usual applications, were used in vain.

My friend, Dr. Reily, saw the patient in this state at 10 o'clock that night: his opinion of the case gave me no expectations of its resulting favourably. On an examination, about two hours afterwards, I discovered that the os uteri was considerably more dilated and yielding. At this time she became very sick at stomach, and, during some efforts to vomit, the fœtus, about one inch and a quarter in length, was expelled, and the patient quite exhausted, was threatened with the most unpleasant and fatal consequences, by continued alimentary and uterine discharges. Camphorated julep and wine whey were prescribed, but only seemed to be adding more mischief. In this embarrassing state, and quite in despair, I resorted to the powdered concrete, hoping that its tranquillizing virtues would have some influence in allaying the irritation; which, indeed, exceeded the most sanguine predilections that were indulged. Irritability was calmed, she reposed, and finally recovered.

Case III.—T. M'Q. a robust labouring man, of short stature, subject to frequent attacks of hæmorrhoides, was seized with nausea and sickness of stomach, pain in the head, fever, and frequent small stools of a greenish-yellow, feculent matter, mixed with a great deal of blood. Precluded from using any active cathartics, I prescribed a small dose of calomel and ol. ricini. The sickness of stomach was relieved, and large quantities of fœtid sordes evacuated. Severe pains and griping continued, and the flow of pure blood from the hæmorrhoidal swellings, which burst by the violence of the tormina, and irritation of indurated fæces. The pilulæ myricæ were given with the most beneficial effects, and from that moment he began to recover.

Case IV.—I was called at 9 o'clock in the evening of the 29th July, to visit Miss C. daughter of Mr. L. L. aged sixteen years, of fair and ruby complexion, and uniform healthy constitution. She was suddenly seized with spasmodic pains in the stomach, which soon extended to the intestines, and showed itself in the most distressing tenesmus, and serous discharges mixed with blood. The pulse frequent; face flushed; skin hot and dry; and much thirst. Ipecacuanha and calomel, āā gr. xij. were combined and administered, to evacuate the stomach and produce a free discharge from the bowels. It had the desired effect: but the disease increased in violence, and I was again called to see her at 2 o'clock in the morning. The febrile symptoms continued unchanged; the evacuations very frequent, and attended with excruciating pain and tension of the abdomen. So frequent indeed were the discharges in this case, that, without exaggeration, they may be said to have been uninterrupted; and which required the patient to be supported in a position to aid its accommodation, without subjecting her to the torture of being moved so frequently. The ol. ricini and tinct. thebaic. were ordered, but were not retained by the stomach; the saline mixture with laudanum to divert the action from the interior to the skin; and anodyne enemata, and fomentations to the abdomen were also used. The diaphoretic was rejected, and recourse was then had to the myrica, half a drachm was given in mucilage, and it acted like a perfect charm: in ten minutes her distress was nearly suspended, and on the repetition of the medicine she went into a sound sleep, and remained undisturbed until daylight. Indeed the change was so great and instantaneous, that serious apprehensions were entertained of gangrene having taken place. She awoke relieved from disease, and gradually recovered.

Case V.—N. B. an aged negro, who attended to my menial concerns, and lived alone in a small cabin, in an unfrequented alley, was missed from his usual avocations for two days. I called at his habitation to inquire after him, as he was addicted to great intemperance at times. I found him prostrate in bed with the dysentery, and quite alone, where he had been two days without taking any thing whatever, and unable to get from his cot to void his filth. He had suffered severe pain, and large discharges of sanies and dark blood; and now was reduced to the lowest state—pulse feeble and intermitting; sky dry, and stools very offensive. All evacuants were inadmissible; the concrete wax was immediately given, in conjunction with brandy toddy. The purging was checked, and his nearly exhausted system resuscitated, and he finally recovered. Some months afterwards he expired in the street, of apoplexy.

Case VI.—H. B.'s family, of Susquehanna township, were all affected with the disease, which threatened an irreparable affliction, in consequence of his two children, aged four and six years, refusing all medicine, and rejecting every deception to administer it secretly. I then gave the parents the concrete wax in the cake, and recommended to them to eat of it in presence of the children; who, conceiving it to be a luxury, became impatient to have it, and ate of it very freely; and like the preceding case, without any preparatory evacuations, were perfectly restored.

Case VII.—C. K. Esq. a highly respectable, and one of the wealthiest citizens of the interior of Pennsylvania, was subject, annually, to a periodical diarrhœa during the summer months, and which was so severe at times as to incapacitate him from attending to his numerous and important duties, and obliged him to use opium constantly during that period. He applied to me to make a trial of the myrica in his case. After evacuating the bowels with calomel and rhubarb, I gave him the pilulæ myricæ, which he took morning and evening for a fortnight, and afterwards occasionally. About two months after discontinuing its use, he informed me that he had not been so well and regular in his alvine evacuations for many years.

I deem it unnecessary to swell the pages with more cases, which would only present a repetition of similar effects. The medicine was equally efficacious in the hands of my uncle, the late Dr. JOHN FAHNESTOCK, of Carlisle, Pa. who procured a small portion from me, and used it in the same epidemic, which prevailed with great violence in Cumberland county.

Gratified by these results, I made it the subject of particular and anxious inquiry; but in all my researches I have discovered but little notice of its medicinal qualities. M. ALEXANDRE* remarks, "that the liquor in which the grain has been boiled, and from whence the wax is procured, having been poured out, and evaporated to the consistence of an extract, he discovered checks the most obstinate dysenteries." In Dr. THACHER'S Dispensatory, Dr. JAMES MANN is mentioned as having used the powdered bark of the root as an emetic, and deems it equal to the ipecacuanha. And Dr. BENJAMIN S. BARTON, in his *Collection for an Essay towards a Materia Medica of the United States*, under the section of Astringents, remarks:—"The Myrica cerifera, or Candleberry myrtle, is unquestionably a *very powerful astringent*, and as such has been employed by the country practitioners of the United States. A decoction of the bark of the root is employed sometimes alone, and sometimes in combination with the bark of the root of the persimmon, or with the bark of the black alder. The simple, or the compound decoction of the myrica, has been used with much advantage in dropsical affections succeeding to intermittents, particularly in the peninsula of Delaware, where dropsies in various shapes, are, perhaps, more common than in any other part of North America, within the same latitudes. The root of the myrica has likewise been found useful in the treatment of *hæmorrhagies from the uterus, &c.* It was remarked by an old physician, Dr. MATHEW WILSON, who had much experience in the use of this vegetable, that it often acted as a purgative." CHARLES LOUIS CADET has written a very interesting memoir on the natural history, &c. of this plant, in the Annals de Chimie, vol. 44; and Dr. JOHN BOSTOCK has instituted an extensive chemical analysis of the product, an account of which can be found in NICHOLSON'S Journal of Natural Philosophy, Science, and the Arts, vol. 4.

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* History of the Academy of Sciences.

What is the precise modus operandi of the myrica in dysentery, I am not prepared to say with sufficient confidence. It certainly possesses a very considerable astringent quality, and in an eminent degree that of a narcotic or anodyne; which was evinced in almost every case by immediately calming the morbid excitement. To the taste, the grain is astringent and somewhat styptic, making a very sensible and lasting impression on the fauces, and has a pleasant balsamic odour. My experiments with the article do not allow me to state, with any assurance, what part of the plant or grain possesses the most active qualities; having used the concrete only, I am unable to make any comparisons. It is only recently that I first received a specimen of the shrub, which was through the politeness of my friend Mr. Henry Buckler, of Harrisburg, on his return from a tour to the lakes during the past summer.

M. Alexandre supposes its astringent quality to reside in the kernel, or the covering which surrounds the seed, which gives a very fine lake colour, in the fresh state; and this property he attributes to gallic acid.

If the virtues of the wax be owing to gallic acid, and if it receives it from the pellicle or the substance of the kernel, we have reason to believe that it may exist to a much greater extent in the leaves and bark; which deserve particular investigation. The property supposed to be gallic acid, may be found to be a gallate combined with a new basis; or, peradventure, a proximate principle. Perhaps it may be discovered to contain a portion of hydrocyanic acid, and the narcotic or anodyne quality of allaying irritation be owing to the presence of this sedative principle. This seems to receive support from an instance of death, mentioned to me by Dr. James T. Boyd, of Virginia, occurring in a person who ate the leaves of the shrub.

Whether the wax alone had any influence in the cure of the disease, I do not pretend to determine. It may be an emollient, demulcent, and have some agency as a bland oil in sheathing the irritated surface of the mucous membrane; but I conceive there are other condiments that will answer much better should we obtain the astringent principle separate from it, unless it be fairly established that the wax has an efficient operation, as is sometimes ascribed to it;* and particularly in the preparation of the oxydum antimonii vitrificatum cum cera, already noticed.

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* Isbrand de Diemerbroeck, Professor of Anatomy at Utrecht, in his account of the fever and dysentery that prevailed in the army during the seige of Lovain, 1635, and particularly in the camp before Schenk-Fort, states the white wax to have been highly successful when all the ordinary remedies had failed; and quotes, as preceding authorities, *Diascorides, Valleroila, Quercetus,* and *So-*

The concrete is efficient only, I believe, in proportion to the quantity of the green astringent principle that it contains. It may be necessary, more explicitly to remark, that the species *Pennsylvanica* was used in my experiments; and I take this opportunity of acknowledging the politeness of Dr. W. P. C. Barton, in aiding me more precisely to determine this point. After having used all the concrete that I received from Erie, I procured some from New Jersey, which did not act with as much promptness and success. It will be an important object to determine the respective qualities, and make a strict analysis of the different degrees of active property each may contain. The Jersey wax is yellower, more granulated and unctuous, bearing a greater resemblance to the bee's wax, and possesses much less astringency: probably it is obtained from the *gale*, which chiefly flourishes in that state.

I regret exceedingly, that my opportunities have not enabled me to come to more satisfactory conclusions, and of making more positive deductions. Notwithstanding my firm belief of its usefulness, I refrain from urging it with that stress which usually accompanies the introduction of a favourite remedy. In truth, I have made but one step towards developing its medicinal virtues, and however well sustained by an extensive experience of its efficacy, I wish a better knowledge of the plant, a more satisfactory investigation of its comparative affinities and greater collateral support. Without incurring the imputation of idle enthusiasm, and dogmatic arrogance, which too much characterises modern propositions and opinions, I would urge it with that reserve which becomes philosophic truths. Should the experiments be deemed worthy of repetition, by which alone the reputation of the article can be established, I think it of much importance that a distinction of the species should be taken into consideration, and the variable strength and consequently the active quality of the concrete.

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lenander. Professor Coxe, to whom I am indebted for the reference to this information, suggests a course of comparative experiments with the animal and vegetable products, to determine their respective merits.

Art. IX. *On the treatment of Chronic Dysentery, with Reports of Cases treated in the Pennsylvania Hospital.* By J. K. Mitchell, M. D. one of the Physicians to the Pennsylvania Hospital.

THE disease concerning which I beg leave to present the following reports, is one generally considered difficult to cure. After having made three voyages into tropical regions, and tested the various modes of treatment for chronic diarrhœa and dysentery suggested by authors, I came to the conclusion that but little success was attainable in their management. Chronic dysentery is the chief scourge of those who resort to tropical harbours not productive of yellow fever: numbers perish with it, and of those who return a great many continue to suffer even for years under this painful and obstinate disorder. Anxious to find a remedy for a disease of which the pathology seemed settled, but for which no very effectual means of cure were known to me, I inquired of our most eminent practitioners; most of whom admitted the obstinacy of this malady, and the general uncertainty of the result of the best conducted treatment. As they agreed in the commendation of farinaceous diet, and cathartics of a mild character, occasionally combined with mercurials and opiates, a treatment long followed in my tropical practice with no very satisfactory results, I was not much encouraged in the search for remedies. Turning for instruction to the physiological school of medicine, I endeavoured to treat chronic dysentery by the greatest possible simplification of diet, and finally reduced my patients to the use of simple gum-water without sugar. The experiment failed. Continuing the mucilaginous diet, the blue pill in small and infrequent doses was used. To my surprise and pleasure, the cases, under this treatment, began to wear a more favourable aspect, and were speedily cured. After varying the experiments in other cases, I became assured that most of the old and obstinate cases of inflamed or even ulcerated intestines, constituting chronic dysentery, are remediable by the exclusive use of *mucilage without sugar*, and of the blue pill given in from three to five grain doses, *not more frequently than once in twenty-four hours, nor less frequently than once in forty-eight hours.* Some cases, of course, required depletion by venesection, &c. and some occasionally demanded the use of means to unload the intestines; but commonly the mucilaginous diet and blue pill afforded almost immediate relief, and soon effected a cure: such a cure too, as withstood the subsequent use of strong food, and much exposure to the weather.

Just at the time when I had attained to confidence in the treatment above described, I entered on duty at the Pennsylvania Hospital, and took charge of the case of Augustine Cardien, who had been for a short time before under the use of blue pill, chalk julep, and a generous diet. In the beginning of July, 1827, he was confined to mucilaginous diet, and blue pill with ipecacuanha. For the further treatment of this case, I refer to the report of my friend, Dr. WASHINGTON, resident physician of the hospital.

The result of this case led his colleague, Dr. CHARLES MIFFLIN, to put under a similar treatment the remaining cases of dysentery, viz. those of David Myers, J. Gardner, and J. Cummings, the details of which he has furnished.

The admission of six seamen, simultaneously affected with dysentery, afforded a good opportunity of trying the treatment without opiates. In the perusal of the report of Dr. Fox, who conducted these cases to a speedy and perfect cure, the admirer of simple and rigorous practice will no doubt take pleasure.

CASE. Augustine Cardien, a French seaman, of small stature, sanguineous temperament, and of a naturally vigorous constitution, was admitted into the Pennsylvania Hospital, June 20th, 1827, with chronic diarrhœa. Subsequently to an attack of scurvy during the first part of the year 1825, this diarrhœa had supervened, and had since continued more or less to the date of his admission, without so far diminishing his general strength as to prevent an attendance upon his duties, excepting for the last three months; in which time, though wholly incapacitated for active exertion, yet he had not been confined to his bed. His diarrhœa not being attended with febrile symptoms, or abdominal uneasiness of any consequence, he was immediately placed upon the blue pill, and the chalk mixture was administered for the purpose of restraining the frequency of his discharges. As his general strength was very much enfeebled, and his diarrhœa not considered of that kind which demanded antiphlogistic measures, he was directed port wine, beef, stale bread, rice and milk. On the ninth day after admission, the above treatment not appearing to benefit the patient, he was directed to preserve his fæces and urine in separate vessels for inspection, and they were examined on the succeeding day: his alvine evacuations were turbid and thin, and of a dun colour, and resembled the washings of meat, in which flocculi of matter are very perceptible; his urine was scanty, but muddy, and exhibited a large deposit of lateritious sediment. His diet was now restricted to the mucilages of gum Arabic and of the slippery elm, and he was directed a pill composed of three grains of the mercurial blue mass, and half a grain of ipecacuanha every night: his wine, and every thing else previously allowed, being discontinued. On the third day after this change, his stools had altered considerably in character, having become of a yellow colour, and though liquid, no longer watery. His urine was less muddy, and his general health had evidently improved. On the fourth day his stools had become decidedly thicker in consistence, and much diminished in frequency. His diet was increased by allowing him gruel made of ground rice. On the fifth day his stools were moulded, though soft, and he stated that they were firmer in consistence than they had been for almost two years past. On the seventh day his diet was still further increased by the addition of a few crackers, and he still continued to improve. On the ninth day the brick-dust sediment being still copious in his urine, *soda water* was directed. His stools were observed to be less firm than previously, but of a browner or more natural colour. His general appearance was improved, and his strength increased; his tongue moist and pretty natural; his pulse seventy, and regular. On the eleventh day his stools had again become liquid, though not watery or serous. As it was supposed that this unfavourable change might have been produced by a too great increase of his diet, the crackers were discontinued. The soda water was also omitted. On the thirteenth day his bowels had become quite loose. His pill of blue mass and ipecacuanha was now omitted, and he was ordered one-fourth of a grain of nitrate of silver in mucilage of gum Arabic daily. On the sixteenth day he had become still worse: in fact, he had almost completely relapsed. The nitrate of silver was now discontinued, and he was again directed to live exclusively on the mucilages of the gum Arabic and of the slippery elm. On the eighteenth day the patient having somewhat recruited, he stated that his relapse a few days past had been occasioned by the secret use of some wine that his friend had brought him. On the twenty-fourth day his stools had become pretty natural in colour and consistence. His urine was also much improved, and his strength greatly increased. On the twenty-fifth day, his diet, hitherto restricted to the mucilages, was increased by allowing him a small quantity of jelly and three crackers daily. On August 3d, the thirty-second day, the patient was a second time very decidedly convalescing, but his bowels still bearing with great difficulty any increase of nourishment, he was directed five grains of the blue pill every other night. The blue pill was continued for upwards of two weeks, and then omitted, as his convalescence was so striking that he did not appear to require its further employment: salivation not being desired. His diet was gradually increased, and he was discharged cured on the 5th of September, about two months and a half after his admission.—*Reported by J. Washington, M. D.*

Case I.—David Myers, a sailor, was admitted on the 8th of September, with chronic dysentery. The precise length of time he had been sick, not now remembered. Three grains blue mass were ordered by Dr. Mitchell, every other night, and the patient was confined to a strict mucilage diet. During the time he remained in the hospital, he took no other medicine, and was discharged cured, having continued here eighteen days. It may be proper to state, that his disease was cured in less time; but he did not wish to be discharged before he tried a stronger diet than the mucilage: on the twenty-sixth of the month, he was discharged cured.

Case II.—J. Gardner was admitted, with dysentery, on the 21st September, combined, as it was at first thought, with rheumatism. Blue mass, p. guaiac. and opium were directed, and continued for a few days without relief. The blue pill was then resorted to alone, and the strictest attention paid to his diet, which consisted of gum Arabic. In a short time he entirely recovered. As he feigned a pneumonia, he continued in the house some time longer. He was waiting for a man to die, who was far advanced in phthisis, and whose clothes he was to receive. The day after the consumptive man's death, the pneumonia suddenly left him, and he took his discharge on that day, the 1st November. His dysenteric disease, however, was entirely removed long before that date.

Case III.—J. Cummings was admitted on the 1st of November, with dysentery, which he had contracted in July, and which, during that time, had rendered him very uncomfortable. He was compelled to get up often, eight or ten times in the night, and suffered no slight degree of pain: his discharges were mucous, and streaked with blood. Five grains of blue pill were given him each night, and he was not permitted to touch any thing but gum Arabic in solution. On the third day after admission, he was compelled to go to stool but twice, and he was up but once in the night, and with much less pain. Each day he improved, and on the tenth of the same month he was discharged well.—*Reported by Charles Mifflin, M. D.*

The six seamen whose cases follow, were admitted into the Pennsylvania Hospital on the afternoon of the 17th of May, 1828, with dysentery of five weeks' duration. They arrived a few days previous to their admission from a port in the West Indies, after a voyage of near four weeks, and attributed their sickness to the warm weather and bad water.

Case I.—Joseph Mitchell, aged thirty-eight years, seaman.—*Symptoms.*—Has had four slimy stools since morning—some pain in the bowels—vomited several times to-day--pulse seventy-five—tongue natural—skin moist.—*Treatment.* Ol. ricini, ℥j. statim; pil. cœrulæ, grs. iij. at night. Diet restricted to gum Arabic water and slippery elm tea.

18*th*, 9 A. M.—Pulse, tongue, and skin natural—one stool since oil operated. Directed grs. iij. pil. cœrulæ to be taken at bed time, and to continue diet as yesterday.

19*th*, 9 A. M.—Three stools in last twenty-four hours. *Diet.* Tapioca and one cracker, in addition to slippery elm tea and gum Arabic water.

20*th*, 9 A. M.—Three stools, nearly natural; no pain. Continue diet as yesterday. Pil. cœrulæ, grs. iij. at bed time.

21*st*, 9 A. M.—One stool, natural. *Diet.* Tapioca, boiled milk, crackers, and chicken soup, prepared by boiling the chicken in barley water.

24*th.*—Allowed the diet of the house.

26*th.*—Discharged well.

Case II.—Samuel Amee, aged twenty-five years, seaman.—*Symptoms.*—Has had six slimy stools since morning—tormina and tenesmus—pulse ninety, full and compressible—tongue red and rather glossy.—*Treatment.* Ol. ricini, ℥j. statim; pil. cœrulæ, grs. iij. at night. Diet restricted to slippery elm tea and gum Arabic water.

18*th*, 9 A. M.—Two stools since oil operated, these more natural. Continue diet.—7 P. M. Tongue less red—pulse seventy-seven—one stool since morning. Continue same diet; pil. cœrulæ, grs. iij. at bed time.

19*th*, 9 A. M.—No stool since evening—tongue and pulse natural. *Diet.* Tapioca and one cracker, in addition to slippery elm tea and gum water.

20*th*, 9 A. M.—One stool, natural—no pain. Diet same as yesterday. Pil. cœrulæ, grs. iij. at night.

21*st*, 9 A. M.—One stool. *Diet.* Tapioca, boiled milk, cracker, and chicken soup.

24*th.*—Allowed the diet of the house.

26*th.*—Discharged well.

Case III.—Andrew Amee, aged twenty-years, seaman.—*Symptoms.*—Has from fifteen to twenty stools in twenty-four hours, (has had fifty.) These are bloody and slimy and accompanied with tormina and tenesmus—tongue red and glossy—pulse fifty-five—skin moist.—*Treatment.* Ol. ricini, ℥j. statim; pil. cœrulæ, grs. iij. at night. Diet restricted to slippery elm tea and gum Arabic water.

18*th*, 9 A. M.—Five stools since oil operated; these less bloody and with less pain. Continue diet.—7 P. M. Two stools since morning, more natural—pulse seventy-eight. Pil. Cœrulæ, gr. iij. at bed time. Continue diet.

19*th*, 9 A. M.—Three stools since evening—pulse eighty—tongue less red. *Diet.* Tapioca and one cracker, in addition to slippery elm tea and gum water.—7 P. M. Not so well—has had five bloody and slimy stools since morning, with more pain—pulse ninety-two—tongue red—skin hot and dry—pain in the head and bowels.—*Treatment.* V. S. ℥xij. Diet restricted to slippery elm tea and gum water.

20*th*, 9 A. M.—Better. Two stools, slimy but with very little blood, and attended with less pain—pulse, skin, and tongue more natural—blood taken last evening was sizy. Diet same as last night.—7 P. M. One stool, which was more natural and contained no blood. Diet as before. Pil. cœrulæ, gr. iij. at bed time.

21*st*, 9 A. M.—One stool, almost natural—no pain. *Diet.* Tapioca and one cracker, in addition to slippery elm tea and gum water.

22*d*, 9 A. M.—Two stools, natural. *Diet.* Tapioca, boiled milk, crackers, and chicken soup.

24*th.*—Diet of the house.

25*th.*—Discharged well.

Case IV.—Josiah Phillips, aged eighteen years, seaman.—*Symptoms.*—Has twenty slimy stools in twenty-four hours—tormina and tenesmus—some pain upon pressure on abdomen—tongue red at edges, and slightly furred in the centre—skin hot and dry—pulse 120.—*Treatment.* V. S. ℥xij. Ol. ricini, ℥j. statim. Pil. cœrulæ, gr. iij. at night. Diet restricted to slippery elm tea and gum water.

18*th*, 9 A. M.—Much better—pulse more natural—skin relaxed—little pain in bowels—four stools since oil operated, these with much less pain. Continue diet. 7 P. M.—Two stools, these more natural. Diet as before, Pil. cœrulæ, gr. iij. at bed time.

19*th*, 9 A. M.—One stool, without pain, nearly natural—pulse 75, skin pleasant—tongue cleaner in centre. Continue diet, and in addition, allowed tapioca and one cracker.

20*th*, 9 A. M.—One stool. Continue diet as yesterday. Pil. cœrulæ, gr. iij. at bed time.

21*st*, 9 A. M.—One stool, natural. *Diet.* Tapioca, boiled milk, crackers, and chicken soup.

24*th.*—Diet of the house.

26*th.*—Discharged well.

Case V.—Robert Billing, aged thirty-two years, seaman.—*Symptoms.*—Has from fifteen to twenty very slimy stools in twenty-four hours—tormina and tenesmus—vomited several times to-day—tongue red at edges, furred in the centre—pulse 92—skin hot and dry.—*Treatment.* V. S. ℥xij. Ol. ricini, ℥j. statim. Pil. cœrulæ, gr. iij. at night. Diet restricted to slippery elm tea and gum Arabic water.

18*th*, 9 A. M.—Five stools since oil operated—less pain—tongue rather cleaner—pulse 75. Continue same diet. 7 P. M.—One stool since morning, more natural. Pil. cœrulæ, gr. iij. at bed time. Continue diet.

19*th*, 9 A. M.—No stool—tongue cleaning—pulse and skin natural. *Diet.* Tapioca and one cracker, in addition to slippery elm tea and gum water. 7 P. M.—One natural stool—no pain. Diet as before.

20*th*, 9 A. M.—One stool. Diet as yesterday. Pil. cœrulæ, gr. iij. at bed time.

21*st.*—One stool. *Diet.* Tapioca, boiled milk, chicken soup, and crackers.

24*th.*—Diet of the house.

26*th.*—Discharged well.

Case VI.—Charles Cushing, aged twenty years, seaman.—*Symptoms.*—Has from twenty to thirty slimy stools in twenty-four hours—pain in bowels on pressure—tormina and tenesmus—pulse 86—tongue very red and glossy—skin dry.—*Treatment.* V. S. ℥xij. Ol. ricini, ℥j. statim. Pil. cœrulæ, gr. iij. at night. Diet restricted to slippery elm tea and gum Arabic water.

18*th*, 9 A. M.—Four stools since oil operated—tongue and pulse more natural—less pain. Continue diet. 7 P. M.—One stool, more natural—very little pain. Ordered Pil. cœrulæ, gr. iij. at bed time. Diet as before.

19*th*, 9 A. M.—One stool, no pain—tongue improving—pulse and skin natural. *Diet.* Tapioca and one cracker in addition to slippery elm tea and gum water.

20*th*, 9 A. M.—One stool, nearly natural. Diet as yesterday. Ordered, Pil. cœrulæ, gr. iij. at bed time.

21*st*, 9 A. M.—One stool, natural. *Diet.* Tapioca, boiled milk, chicken soup, and crackers.

24*th.*—Diet of the house.

26*th.*—Discharged well.—*Reported by G. Fox, M. D.*

Art. X. *Case of Scirrhus contracted Rectum; connected with Scirrhous of the Uterus and Pregnancy.* By Dr. M. H. De Leon, of Columbia, South Carolina.

On the 2d of March, 1828, I was requested to visit Mrs. B. a lady about twenty-five years of age, and the mother of two fine, healthy children. The history I received of the case was as follows: She had been unwell since the 25th December, but capable of managing her domestic concerns till within the last two months. At this period she found much difficulty in evacuating her bowels, when assisted with strong purgative medicine. Heretofore she had considered her constipation to be the effect of pregnancy, but for the month preceding the time of my being called to her, she had not been able to evacuate the fæces at all. Her urinary discharge was much obstructed, with great pain and tenesmus in passing water, which she could only accomplish by placing her body in a particular position. These symptoms had been gradually increasing for some time.

Her complaint had been treated as "constipation of the bowels, connected with pregnancy." Predicated on this view of it, she had, by the advice of her medical attendant, taken much purgative medicine without producing any other effect than distressing tenesmus: but latterly she had been constrained to desist from their application, and abandon even the mildest laxatives, as they never failed to create more misery than they relieved. In this distressing dilemma, she sought relief, from her pain alone, in large doses of laudanum, which rendered her comfortable for the time. On asking if she had ever tried enemata, she informed me the attempt had frequently been made, but they could not be forced into the bowels. Her general health at this period appeared but little implicated. She had a good appetite, but as the distention of her bowels had become painful, she restrained it, and only indulged her inclination for food, with rye mush and new milk.

From this detail of symptoms, I was at once inclined to the opinion that there existed either stricture of the bowel itself, or some tumour pressing so upon the rectum, as mechanically to obstruct the passage of the fæces.

Her husband and herself being both intelligent, I had no trouble in convincing them that a manual examination was necessary to determine the nature of the case. After examining the abdominal tumour externally, and finding it very voluminous and uniform, and not being able to trace the fundus of the uterus, making the necessary preparation, I placed her in a proper position, and passing my hand, well lubricated, into the vagina, it was soon opposed by a very firm body, which I traced to be the fundus of the uterus. That viscus must have been retroverted, by her account, at least nine or ten weeks before the period alluded to; as she then considered herself between the fourth and fifth months of utero-gestation, having felt her child, but observed at the same time that she had borne two children, but the movement she then experienced was very unlike that she felt in her former pregnancies. Many of the rational symptoms of pregnancy being absent, a very strong doubt was then created in my mind whether the uterus contained a child or some foreign body, the indication being the same in either case. I proceeded to restore the uterus to its natural situation, in which I succeeded, after a few patient trials. The vagina was greatly relaxed, owing to a profuse mucous discharge, which occurred about the period of her last catamenial discharge. Enjoining the most exact repose in a horizontal posture, she very soon passed urine freely.

My next care was to examine the rectum, which I did by passing into it a flexible catheter of large size, armed with a syringe. But on attempting to pass the fluid out of the syringe into the bowel, I found it to be impossible. I made another trial with a wax bougie, with as little success. The patient being now much fatigued, I deferred any other mode of examination at that time, but prescribed a mild sudorific draught at bed time, and a gruel diet.

My next examination was made by the introduction of one finger into the vagina and another into the rectum. This examination instructed me conclusively, that the intestinal tube had undergone a change of structure; which fact was fully corroborated by the finger in the vagina, as far as it could reach. The capacity of the bowel below the stricture, was greatly enlarged; that above it, much narrowed, grasping the tip of the finger firmly as a hard ring. A soft membrane, which I concluded to be the mucous membrane of the bowel from above the seat of disease, protruded through this ring; not unlike what occurs frequently in protracted dysentery and diarrhœa. This membrane was very yielding, forming a kind of pouch, and moving readily before the finger. The nature of the case being clearly shown, I did not disguise from the husband her danger, and candidly prognosticated what I believed would be the issue. But leaning on "hope" and her "youth," he could not persuade himself that the prospect was so unpromising.

The paroxysms of pain were at this juncture severe, referred altogether to the epigastric region, attended with nausea and occasional vomiting. I prescribed such palliatives from time to time, as each indication seemed to me to require, and I used a flexible bougie of proper size for one week perseveringly, finding not the smallest advantage gained, I next resorted to the tallow bougie with as little success, and lastly, to the metallic. Finding my efforts totally unavailing, and the accumulation in the bowels painfully increasing daily, and now producing violent spasm, I proposed a consultation with my intelligent friend, Dr. EDWARD FISHER, Sen. who politely attended. After carefully considering the case, he remarked to me that the bougie was the only course which promised any benefit under such unpromising circumstances, and advised a perseverance in its application, increasing their size as any advantage might be gained. This course was unremittingly pursued for two weeks longer without the smallest amendment that I could discover. In this truly distressing conjuncture, distressing beyond the power of description, from the insupportable accumulation in the bowels, her agony amounted to torture from this cause alone, superadded to which, she suffered under retention of urine.

Perplexed, and perceiving no alternative for the relief of her agonizing sufferings, I again urged the necessity of another consultation, (Dr. Fisher being then absent.) Two gentlemen of standing in their profession were called in; they attended, and after detailing to them the whole progress of the disease, with the treatment, and making a manual examination in their presence, I proposed to divide the membrane, (before alluded to,) with a bistoury carefully introduced along the forefinger, on the ground that we should at least have an outlet for the fæces, which the membrane obstructed as a valve, and which accumulated above it. By this expedient I did not hope to cure the disease, but only to empty the bowels, and to render the remnant of life supportable for the time she did live; at least it seemed to me to be giving the only possible chance of living, as my patient had not evacuated the alvine canal in nine weeks!

The gentlemen, however, objected to my proposition, on the score of consequences which might succeed to the operation. I was therefore overruled in the performance of it, but confess, to my mind it appeared the only plan by which an outlet could be given to the fæces, which at this crisis had become so burdensome as to render respiration exceedingly difficult, and make life itself so insupportable as to cause her more than once to pray for death, as the only probable release from misery. Nausea and vomiting were now almost incessant. I yielded to the opinion of my friends to a perseverance in the use of the "bougies," which, after one week longer, it became impossible to introduce, from the strong and unyielding contraction of the sphincter ani muscles, insomuch that with all the address I could bring to my aid, I could not introduce the tip of my little finger into the passage. From this time she began to sink; her sufferings were more acute than I thought could possibly be endured; vomiting was nearly constant, and when not vomiting, she complained greatly of the child in utero distressing her by its movements, (for at this juncture her pregnancy was unequivocal.) In a day or two after, the vomiting became unremitting, stercoraceous matter was mixed in the contents of the stomach, and five or six hours after this appeared, labour-pains came on, and in three hours, (with very little comparative suffering from this cause alone,) I delivered her of a well-formed fœtus of between the sixth and seventh month. The secundines followed soon after the birth of the child; the uterus contracted well above the pubes —the whole loss of blood did not exceed one table-spoonful. The child had been dead but a short time; the abdomen appeared more voluminous after the birth of the child than before; stercoraceous vomiting still continuing, she died in a few hours.*

Dissection, twelve hours after death.—Having obtained leave to examine the body of Mrs. B., I proceeded to the examination in the presence of Dr. B. F. Harris and my students.

The body, when stripped of its clothing, exhibited a spectacle uncommon in a woman of low stature and delicate frame. Its circumference, carefully measured from the crista of one os ilium to the opposite, was three feet and seven inches.

An incision was next made from the middle of the sternum to the pubis, and dissecting back the common covering, the peritoneum and omentum were exposed. These membranes were highly vascular, thickened, and inflamed, the vessels exhibiting a kind of net-work. The dissection was at this stage interrupted by the great effusion of fæces into the cavity of the abdomen. Whether this rupture of the intestine happened before or after death, it is impossible to determine: it did not, however, occur during the dissection. After securing the ruptured intestine, which we traced to be the ilium, we proceeded carefully with the examination, although a very disgusting task. The whole track of the intestines furnished an appearance and size I could not have believed possible in a human being! The circumference of the colon measured thirteen inches and an half. The duodenum was of equal size, the ilium not less than either. The whole canal was filled with fæces of the consistence of thick gruel, with a due admixture of bile. On the first view of the bowels I could assimilate their appearance to those only of the largest of the inferior animals. The whole mass was glued together, and the adhesions so very strict as not to be separated with the hand alone.

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* Had I seen a case of "stricture of the rectum," reported by Dr. Jameson, of Baltimore, (before I had my last consultation,) in which he operated with success, I should certainly have performed the operation in my case. It will be recollected that I commenced the treatment of this patient on the 2d of March, and she died on the 16th of April. One month prior to the 2d of March she had not one alvine discharge, making the period of total obstruction two months and fourteen days!

The intestines were now removed for further inspection, and after being emptied and washed, were examined. They exhibited a high degree of inflammation throughout their whole extent: they had lost their valvular structure, the canal being continuous. The fæces emptied out of the tube could not be measured, but the bystanders estimated the quantity at not less than from five to seven gallons. And from the enormous distention of the intestines it seemed not exaggerated.

Many days before her death, the exhalations from her body became so very offensive as to render her room insupportable to the attendants, in spite of every precaution that could be used to render it comfortable.

The *stomach* was much contracted, insomuch that at first sight it was overlooked; its coats had undergone an entire change; it was highly inflamed and thickened, containing feculent matter.

The *liver* was firm, but somewhat increased in size, otherwise healthy.

The *gall-bladder* sound and natural.

The *kidnies* had undergone no change whatever.

The *uterus* was minutely examined. It was very firmly contracted above the pubes, and resembled a solid body; the omentum adhered to it intimately. After dissecting it out, and cutting through its parietes, it opposed the knife with a crepitus not unlike the cutting through gristle; this scirrhosity pervaded its whole structure. The portion on which the placenta had been implanted, could scarcely be distinguished. The organ had little the appearance of so recently giving an outlet to so large a body as a child between the sixth and seventh months.

The *bladder* was small, contracted, and much changed from its structure and natural appearance.

The *rectum* was then examined, first carefully dissecting it out.

Its whole structure had undergone a change; for the space of seven or eight inches it resembled gristle in texture and appearance. In many parts it approached nearer to the substance of bone, as it resisted the edge of the knife. As it reached within two or three inches of the sphincter ani, the canal was contracted to the size of a finger ring, resembling a circle of bone, and not admitting the little finger to pass entirely through it with all the force that I could exert. Through this ring the adventitious membrane escaped.

Before I dissected out the rectum, I introduced a large metallic bougie from above downwards, so as to verify my views as to the membrane spoken of in the history of the case. It was carried before the instrument without the sphincter ani. I investigated this pouch minutely, and could discover no opening into it by which the fæces could have escaped. During the lifetime of the patient I could always reach it with my finger introduced into the bowel, being pushed down in the form of a valve from the accumulation above it.

The parts have been preserved.

Columbia, S. C. June 4, 1828.

Art. XI. *On the Utility of Prussiate of Iron in the treatment of Intermittent Fever.* By Samuel Jackson, M. D. of Northumberland.

ABOUT eighteen months ago we had several cases of chronic pulmonary inflammation, attended with frequent attacks of intermittent fever, in which, as the bark was inadmissible, we determined to try the prussiate of iron. In these cases it often prevented the paroxysms for one, two, or three weeks, and in this respect it was precisely on a footing with bark; but it was a far safer medicine, for it never, as we believe, aggravated the inflammation; and hence, by checking the fever, it afforded a fair opportunity for bleeding away the visceral disease.

The time, however, soon arrived which was to afford the most ample opportunities of experimenting in the recent fever, and such was our success with this medicine in the first eight or ten cases, that we became quite enthusiastic in our estimation of the remedy. But further experience showed that though it was the most certain of all the substitutes for, it was far from being of equal power with the bark. Dr. Zollickoffer, to whom we are indebted for its introduction as a remedy for intermittent fever, says that in preventing the paroxysm, "it is more certain, prompt, and effectual than the justly celebrated cinchona," and that "a patient treated with this article will recover from the influence of intermittent and remittent fevers in the generality of cases in much less time than is usual in cases treated with bark." This is truly a high commendation, but unless the doctor prescribed bark of an inferior quality, we cannot conceive how he could rate the prussiate or any thing else as more prompt and effectual. We know nothing more certain, more undeviating in its operation than bark, when properly administered; nay, we are emboldened to say from an experience of some thousand cases, that it will never fail when used with prudence. We do not pretend that it will cure every case in every state of the body. Intermittents are often attended with such inflammation or lesions, that a long, patient routine of preparation is necessary, and in many cases nothing but mercury, or time, or death, can cure; but these are clearly not to be taken into the account. Bark is not a medicine of regeneration—it cannot reintegrate the liver, the lungs, or any other disorganized part; but take ten thousand patients in recent mild intermittents, who were previously healthy, prepare the system properly, administer an ounce of bark, or twelve grains of quinine in proper portions during the interval, and we boldly assert that it will cure every case, and restore the patient for a time to perfect health. We do not say that our own experience has been so fortunate, but whenever unsuccessful, the fault was not in the bark. Patients are sometimes a little unobservant of our prescriptions; often they do not comprehend, and not unfrequently the physician is deceived in the state of the system, or in his haste to cure, he prescribes the bark too soon.

We are aware that the Peruvian antidote has fallen a little in public estimation since the promulgation of the doctrines of BROUSSAIS; but perhaps the time is not far distant, when the experience and accumulated wisdom of many generations will obtain their just regard. The most truly useful, the most clearly beneficent of all the gifts of heaven, are those which have been the most abused, and the cinchona happens to be one of the number. As an example of what we consider an abuse of the remedy, we may refer to the case of Etienne, Vol. I. p. 436, of this Journal.

We have thus stepped aside from the first proposition, in order to express our good opinion of the bark, that the reader may the more justly appreciate what we have to say concerning the medicine in question.

If the prussiate of iron is equal to the bark, it has not proved so in our hands. We have used it in not less than two hundred cases, which were altogether favourable for the immediate extinction of the disease by cinchona, but it failed, as we presume, in every fifth or sixth instance. It is true, that in most of the cases in which it failed on the first trial, it proved successful in the second, third, or fourth interval immediately following; nor do we recollect any case in which the disease did not finally yield to this continued use of the medicine; but in all those instances we should have confidently expected to cure in one interval by the superior virtues of bark or quinine. As to relapses or recontractions of the disease, we believe they occurred about as soon and as frequently as they did after cures performed by cinchona. Dr. Z. says that patients "will recover from the influence of intermittent and remittent fevers, in much less time than is usual in cases treated with bark." By this we presume he means, that the final extinction of the disease is sooner attained. This we have not found to be the case. The medicine does not, like the bark, directly improve the appetite, and strengthen the enfeebled body; all that it does is to check the fever, and leave the system to its own recuperative powers. This we have reason to be assured of, for we have given it in smaller doses every second day, as a preventive, without any of that wonderful corroboration which so certainly follows the use of bark.

But here it is necessary to regard two points, on which experiments are limited, and knowledge therefore uncertain—the doses of the medicine, and the states of the system in which it may be given with the greatest success. It is possible that when these are ascertained, the prussiate may prove a more certain medicine than it has hitherto been.

First, then, with respect to the states of the system in which it is best administered. We have presumed that the body ought to be prepared precisely as for the bark, and that the medicine ought to be given during the interval. We have preferred giving the bark at least twelve hours if possible in quotidians, and twenty-four hours in tertians, before the time of accession, and the same rule we have observed in the use of the prussiate. Dr. Z. does not inform us in his paper whether he confined the use of it to the apyrexia, but Dr. Chapman, Therapeutics, 5th edit., tells us that he did not; and Dr. Hosack, app. to Thomas's Practice, 8th edit., says it has this advantage, "that it may be given in every stage of intermittents." It is possible that it may be even more effectual when given in the paroxysm, and this is one point to which practitioners ought to direct their attention. We have never used it thus in a single instance, but in quotidians we have directed it to be commenced with, as we often do the bark, in the decline of the sweating stage, in order that it might have more time to impress the system. Further experience may reveal something more certain and useful in this particular. It was reserved for the last year to show that bleeding may be used with advantage in the cold stage of *some* cases, and therefore we need hardly despair of learning something further concerning the most advantageous administration of the new medicine.

In the second place, much of the reputation of the prussiate will depend on the doses and the quantity administered. Dr. Z.'s medium dose appears to have been six grains, two or three times a-day. Dr. Chapman, Therapeutics, 1827, does not appear to have experimented much on the subject himself, but says that Dr. WORTHINGTON, a respectable physician of Washington city, gives it in scruple doses. We began with the quantum of sixty grains, to be given during the interval, and this was uniformly successful in the first eight or ten cases; as soon as this was found to fail, we gave it with more freedom, and as it lay easy on the stomach, we gradually increased the dose so as to give two drachms during the interval. After having checked the disease, we have given from twenty to forty grains every second day for a fortnight, as a preventive, and this without any present or subsequent evil.

The proper dose, therefore, of this medicine, does not appear to be yet ascertained. Modern physiologists are surprised to discover how even SYDENHAM trifled with the bark, and our successors may find the same reason to complain of our sparing use of the prussiate. We did not go beyond the doses mentioned, because they were pretty generally successful, at least in the second or third interval, and we did not wish to be profuse in the use of a new medicine, till we should have time to observe whether it might secretly lay the foundation of future mischief. The time may come, when an ounce given during the interval, shall be found as successful as the same quantity of bark; but such doses of this compound are not to be hastily ventured upon, merely because they may produce no present distress. Like arsenic and lead, it may possibly subject the system to many future evils; but we have thus far observed no mischief whatever to result from it in any of our patients.

This medicine appears to have five advantages over bark. 1. It can be given when inflammation is present, without sensibly aggravating it. 2. It is less likely to do harm when taken without medical advice. 3. It may be given in the advanced stage of remittent fevers, when we are yet doubtful of the propriety of bark. 4. It may be useful in persons whose idiosyncrasies would seem to rebel against bark. 5. It is a much less expensive remedy.

The *first* advantage, that it can be given without detriment when inflammation exists, is alone sufficient to entitle it to our warmest recommendation. We do not mean that a patient with strong, hard pulse, and strength not broken down, is to be forthwith treated with this medicine—far from it; he must be prepared in every respect as for the use of bark, by bleeding, purging, spontaneous diaphoresis. But every one knows that in his course of treating autumnal fevers, many cases occur attended with slow inflammation; that in many of these, the cause and the effects aggravate each other, and give rise to ulterior mischief; that very often he can neither bleed away the inflammation entirely, nor yet give bark with safety to cure the fever. It is not here necessary to particularise such cases. But hold—we do not mean that bark cannot be given with safety, when some little phlogosis exists; we know the contrary—but we know too that it is a perilous practice, and that it causes and aggravates those internal inflammations, of which BAGLIVI makes such piteous complaints, and which he attributed with some justice to the use of bark. We do not pretend that the fever cannot often be cured by cinchona, and the inflammation by its appropriate remedies; but surely if there is a medicine that is capable of arresting the fever without aggravating the internal mischief, there is one most important indication attained. It has often happened in our practice, that a common pleurisy was not half subdued, till an ague supervened to embarrass all our proceedings, and the unfortunate patient has been obliged to struggle with the disease, now aggravated either by quinine, or by a daily paroxysm of intermittent fever.

But there is a combination of diseases of more frequent occurrence to be found in countries subject to autumnal fevers; the lungs and liver are left in a state of slow inflammation, and the patient at the same time labours under an habitual ague. This is truly a deplorable state of things, and one in which the physician will often be assisted by the peculiar virtues of the prussiate of iron.

The *second* advantage to be noticed is, that it must always prove a safer medicine in domestic use and in the hands of ignorance. We are aware that bark is often used by the unlearned in medicine with entire safety, but sad experience has taught every physician how prone many families are to tamper with active medicines, to the irreparable injury of their health. It is thus too common among those who are more economical than prudent, to puke, purge, sweat, and then take bark, however often they fail, and whatever mischief they do. If it leave a pain in the limbs and head, with slow fever, restless nights, and all that train of evils with which patients walk about all day in distress, and lie down at night in despair; all which a physician could remedy in a few days; if it finally leave a slow inflammation in the liver, the lungs, the bowels, or the head, and the sordid devotee of economy sink into debility and visceral lesions, never to know health again, let not the bark be blamed for any part of this mischief. As well might you endeavour to discredit the properties of the fire that has burned down your house, or of the water that has drowned your family.

The *third* advantage abovementioned is, that it may be sometimes given in the advanced stage of remittent fever, while bark is still, at least in our climate, a very doubtful remedy. In the treatment of remittents we have always been governed by the principle, that bark was not admissible till a decided intermission was attained. The actual existence of this is sometimes very uncertain, and in such cases we have given the prussiate with the effect of securing the patient from any subsequent exacerbation, and thus had him ready for bark on the following day. It sometimes happens that this is really a matter of vital importance, as the patient may become so worn down by the continuance of fever, as to be brought into imminent danger from every successive paroxysm. Whether the new medicine would prove salutary in slow typhus, which is apt to remit a little during the fore part of the day, we have not ascertained; but we certainly anticipate much benefit from it in such cases, and shall make the experiment in the very first that present.

The *fourth* advantage is, that it may be given to persons whose idiosyncrasies, whether natural or acquired, would seem to abhor the operation of bark in all its preparations. We know one lady who cannot take the cinchona in any form without puking, and even quinine pills would not lie on her stomach, though given with every care and without her knowing that they were extracted from bark. A gentleman of this town cannot take a sufficient quantity of bark to cure an ague, without suffering the most ungovernable restlessness, and a certain inexpressible distress of the nervous and cerebral systems; nor can he take a fourth of a grain of quinine every two hours, without having his teeth on edge with the acid—a fact almost incredible. To such patients as the above, it is probable that prussiate of iron might prove a medicine of great value.

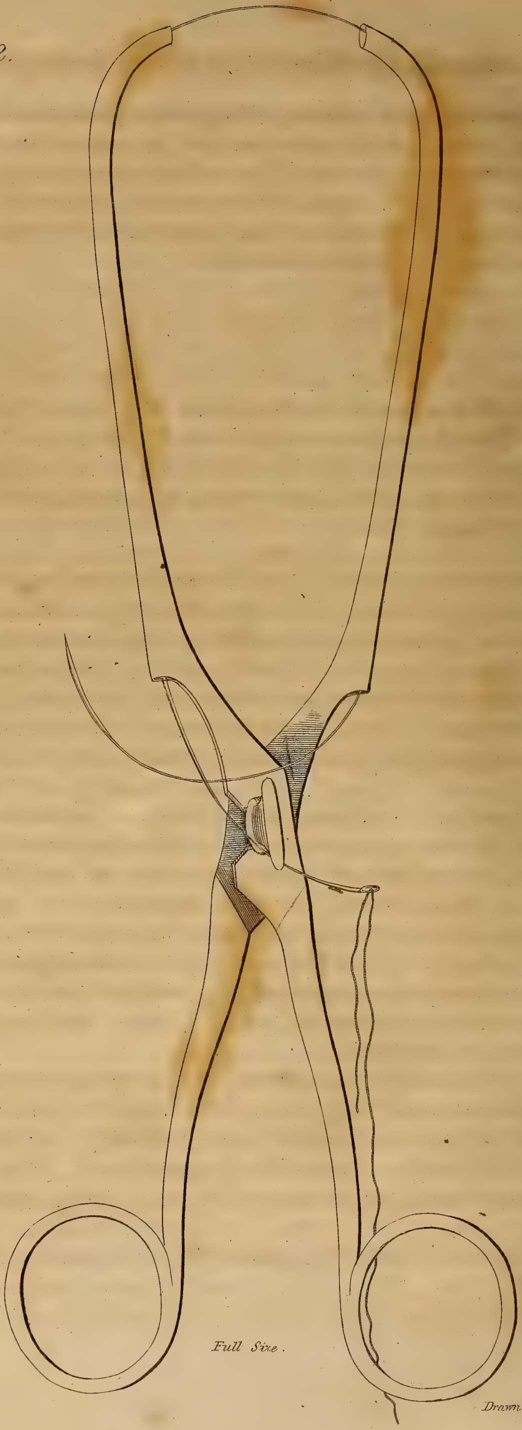
From what little we have read and observed concerning this medicine, we shall venture to call it a specific, however unpopular the epithet. One potent argument in favour of its efficacy is this:—it often produces symptoms of intoxication, with all those distressing affections of the head, obtuseness of seeing and hearing, with ringing in the ears, which so often follow the use of quinine. It must here be observed, however, that this observation was confined to one single season. Whether these affections are more troublesome in some years than others, we have not learned; but this we are assured of, that in our practice we never heard of *mere bark* producing them till last summer. In 1823 we took strong bark daily as a prophylactic for five months, generally from four drachms to an ounce every day, and not unfrequently half an ounce at one draught, yet no cerebral distress, nor any other evil followed; we enjoyed uninterrupted health and unusual vigour through the whole period, notwithstanding an accumulation of labour, upon which we have often reflected with astonishment; but last summer a single drachm a day brought on so much tinnitus as to confuse the mind, and compel us to abandon it. Many others made the same complaint of the bark, though they had taken it in former years without any of this uncomfortable affection. Quinine has always proved more or less troublesome in this way, but last summer it was particularly distressing, let the parcel from which we prescribed come from where it might. We had no other proof that the iron affected the head or stomach more than in former years.

It is said above that we believe the prussiate to be the most certain medicine after bark in the cure of intermittent fevers. It is true we have not been very industrious with some of our own country remedies. Two or three species of *Cornus* are certainly useful, and particularly if the bark be taken from the root; we have often used them with success when the system appeared to have become through frequent repetition insensible to the specific operation of cinchona. But as leading articles in practice, we have generally found all remedies from our own forests to prove more troublesome than useful, and have therefore seldom employed them till others failed. ARSENIC is certainly a medicine of some efficacy, but it is slower in its operation than the prussiate. It destroys the appetite, leaves the patient in a debilitated state, and as it has often done much secret mischief, and withal, is not necessary, we humbly presume that it ought to be abandoned as a primary remedy. In chronic cases, however, we have used Fowler's solution after wholesome medicines had failed; it generally poisoned the disease sooner than the patient, and thus effected more lasting cures than any other medicines. The *extract of pepper*, as noticed in Vol. I. p. 115 of this Journal, we have used with thrice the freedom that is there recommended, and yet it required two, three, and four intervals to effect a temporary cure. It ought never to be taken without the advice of a physician. An only daughter of a highly respectable man took pepper tea just before the time of accession, and a cerebritis immediately ensued which carried her off the following day: a fact highly favourable to *physiological* medicine, and which may often occur in the use of pepper, or its extract, if inflammation exist in the brain or stomach. The *piperine* is far less pungent than the extract, and yet more successful—a fact which goes to show that there is really some specific virtue in the medicine, and that it cures, independent of its heating properties. We have lately used it in four chronic cases with complete success. In these we gave eighteen grains during the last ten hours of the interval, without any mitigation of the paroxysm; but the same treatment and dose in the next interval proved successful. In either case it was very certain that ten grains of quinine would have performed the cure at once. However this may be, the piperine promises to be a most useful succedaneum to the bark in many cases and states of the system, and it ought to be received at once among the *experienda* of every physician.—See Vol. I. p. 110 of this Journal.

If it be inquired why we made such free use of the prussiate, a medicine which was found to be inferior to the bark, we answer that it is always desirable to ascertain the virtues of every new agent; that finding it so very successful in the first few cases, and at the same time so much neglected by writers, we determined to bring it once more before the medical public. This we have done one year sooner than was intended, and of course our observations are not as precise and philosophical as they ought to be. This default, it is hoped, will soon be remedied by the care of more competent observers. Let them try the medicine freely, and publish their experience—a variety of practice, and a collision of opinions will finally establish its real uses and value; let them not be discouraged by hearing of its various virtues and improbable cures in other diseases—there is no medicine which is not abused on its first introduction into practice. We have used four pounds of it within the last year, and still use it with increasing confidence. Dr. Thacher tells us that it was employed in the New York Hospital "with little success;" but as it is possible that the house might have been furnished with some of a bad quality, and as mistakes may easily be made in this respect, we shall conclude with Dr. Zollickoffer's directions for choosing it. "Care must be taken to select that which is of a very dark blue approaching to black, having a shining coppery fracture and adhering firmly to the tongue." The inferior variety is of a lighter blue—we have not used it in a single case, and are of course unacquainted with its comparative value.

We cannot conclude without congratulating the reader on the rapid progress of science, and the happy results which are therefore auspi-

Plate 5, Vol. 2.



Full Size.

Drawn & Eng^d. by J. Drayton.

ciously promised to the industry of successive generations. Within the last six years, quinine, piperine, and the uses of the prussiate have been discovered, and our little children are no longer made to suffer repeated attacks of ague, till the cure be attained by bark injections and jackets, or their systems rendered unsusceptible of fever by the poisonous debilitation of arsenic.

Art. XII. *Description of an Instrument designed to facilitate the introduction of Ligatures into and around Deeply-seated Parts, as in cases of Fistula in Ano, &c.* By J. K. Mitchell, M. D. one of the Physicians of the Pennsylvania Hospital and of the Alms-house Infimary.

THE instrument consists of two limbs with handles, united by a joint similar to that used in such obstetric forceps as have a screw. The limbs are hollow, and are so curved, that when the handles are approximated, the opposite ends meet, and one of them passes a very little way into the other, so as to make a continuous canal from one limb to the other. That limb which enters the other is made with such a cutting edge as is formed in the punch of the saddler or shoemaker.

When it is applied in a case of fistula in ano, the limbs are separated, and the one with a punch-like extremity is passed into the fistula as high as possible; after which, the other is inserted into the rectum, and the joint then made fast by means of the screw. By bringing the handles towards each other, the ends of the limbs are made to approach and finally to meet, and one passes into the other.

In some cases, as in complete fistulæ, nothing is cut, in some cases the intestine only is perforated, and in others a portion of cellular matter must be penetrated.

When the canal has been made continuous, a piece of watch-spring, sharpened at one end,* and armed at the other with a ligature may be passed without much difficulty along the canal, through the fistula and out at the rectum, drawing the ligature after it. When the ligature is drawn through, it is separated from the spring, and the limbs being disunited are successively withdrawn, leaving the ligature behind them.

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* The sharpening the end of the watch-spring was suggested by Dr. Thomas T. Hewson.

On the 21st of June, 1828, Dr. Hewson did me the favour to apply this instrument, in a case at the Pennsylvania Hospital, where from the extent of the parts between the fistulous canal and the rectum, the use of the knife might have been hazardous. In all such cases, and in those extending to a point beyond the reach of the finger, such an instrument will perhaps be found a convenient mean for the introduction of a ligature.

It might also perhaps be found useful to conduct a ligature around a deeply seated artery,* and by no means an inconvenient method of applying a band to the root of an internal tumour, when so situated as to prevent the use of the double cannula.

The essential parts of the instrument are the joint admitting of the separation of the limbs, the hollowed limbs, and the punch-like extremity of one limb capable of entering the other; together with a watch-spring so curved as to pass readily along the hollowed limbs. The form and size of the instrument might be variously modified to suit various cases; and, as in the several obstetric forceps, the joint might be diversified.

It is easy to suppose that, by means of such a joint, a limb like a bistoury either sharp or probe-pointed, might be substituted for the perforating limb of the instrument; and, after introduction of both the bistoury limb and the other, the locking of the joint and the closing of the forceps, the simply withdrawing the instrument, would cut through all the parts usually divided in operations for fistula in ano.

A more slender instrument formed nearly like the one delineated in the accompanying figure, Pl. V. might be advantageously used, when it is thought expedient to pierce the *os unguis*, in some forms of *fistula lachrymalis*.

The instrument was made by Mr. Schively, surgeon's instrument maker.

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* In using it for an artery, the limbs need not be separated; the ends being a little distance apart, will pass one on each side of the artery, and when beneath it they may be brought into contact; and the ligature can then be passed around it.

ART. XIII. *Meteorological Observations made on the Island of Tinicum, eleven miles south-west from Philadelphia, latitude* 39° 48′, *for the year* 1825. By GEORGE F. LEHMAN, M. D. Lazaretto Physician of the Port of Philadelphia.

FOR several years past I have recorded the daily variations of the thermometer, the state of the winds, and other atmospheric occurrences, while resident at the quarantine station on the island of Tinicum, and in the city of Philadelphia, with such general remarks on the weather, as attracted my attention in various parts of our widely extended continent.

Such a concentration of facts may be hereafter interesting and useful to minute inquirers into the changes our climate has undergone in the lapse of time, and its diversified influence at distant periods on the health of our citizens, and the duration of human life.

The agency of heat and cold, and moisture and dryness, in the production of disease, and their intimate connexion with most epidemics, will not be disputed. In the meteorological observations for 1824, published in the Philadelphia Journal of the Medical and Physical Sciences, Vol. XIV. some prominent and irrefragable facts in proof of this agency were enumerated.

Impressed, therefore, with the belief, that a knowledge of the natural phenomena appertaining to the climate of every section of our country, is important to the physician, I shall protract my diary, unless some ardent labourer in the same field renders it nugatory, by his superior attention and industry.

Having removed my family to Philadelphia the last of September, the observations for the three succeeding months were made in the city. As the difference in latitude is only nine minutes, no material dissimilarity could be expected in the climate, and for the years 1826, 27, and 28, I made, and continue the register alternately in the city and on the island.

JANUARY, 1825.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	38	40	40	N. E.	Cloudy. Rain. Snow at night half an inch deep.
2	24	24	28	N. W. a gale.	Clear.
3	29	31	32	S. W., N. W.	Clear.
4	25	29	31	S. W.	Clear.
5	24	31	34	N. W.	Clear.
6	32	38	36	N., N. W.	Clear. Overcast.
7	28	31	32	S. W.	Clear. Cloudy.
8	34	35	35	S. E. a gale.	Cloudy. Small rain, and snow that dissolved as it fell.
9	36	45	41	N. W. fresh.	Clear. Thin ice made in the Delaware at night.
10	22	30	30	N. W., S. W.	Clear. Ice floating in the Delaware.
11	26	32	34	S. W.	Clear.
12	30	36	40	N. W., S. W.	Clear.
13	35	37	38	N. E.	Cloudy. Rain at night.
14	35	39	40	N. E.	Cloudy. Rain all day.
15	39	42	46	S. W.	Cloudy. The ice has all disappeared in the Delaware river.
16	39	47	46	N. E., S. E.	Cloudy. Clear. Drizzle at night.
17	43	46	46	N. W. fresh.	Clear. Daffodils breaking the ground.
18	31	35	38	N. W., W.	Clear.
19	36	44	44	W., N. W.	Clear. A sprinkle of snow at 7 A. M. Mild and pleasant weather.
20	32	38	40	N., S.	Clear. Common strawberries in blossom. Lettuce salad growing and good.
21	36	39	43	S. W., N. W.	Cloudy. A sprinkle of snow at 5 A. M.
22	23	25	28	N. E. fresh.	Cloudy. Ground frozen. Wind violent from N. E. all night.
23	23	24	25	N. E. violent, N.	Cloudy. Ground frozen. Wind very fresh from N. W. all night.
24	28	35	39	N. W. fresh.	Clear. Ground thawing in the sun.
25	35	39	40	N. W.	Cloudy. } Mild and pleasant weather.
26	36	40	41	S. W.	Overcast.
27	36	42	42	S. W., W.	Clear.
28	35	44	47	S., S. W.	Clear.
29	36	42	38	W., N.	Cloudy. Clear.
30	20	27	30	N., N. E.	Clear. Thin ice in the Delaware.
31	26	36	38	S. E., S.	Hazy. Ice in the Delaware.

Total rain during the month - - - - -	1.69 inches.
Mean temperature - - - - - -	35.02° Fahrenheit.
Maximum - - - - - - -	47°
Minimum - - - - - - -	20°
Range of Thermometer - - - - -	27°

Hottest day, 16th—Coldest day, 30th.

Comparison with January, 1824.

Mean temperature - - - - -	3.23° less this year.
Maximum - - - - - - -	6° less.
Minimum - - - - - - -	2° less.

Halifax, N. S. January 1st.—A beautiful butterfly of the oak species was caught in the street.

New York, January 2d.—The first winter-like weather this season commenced to-day. In the course of last night a heavy N. E. rain storm was succeeded by snow, which continued to fall till morning, when the wind came round to N.W.

Boston, January 4th.—A storm of rain commenced on the 1st, which soon changed to snow. The snow fell about five inches deep. The wind was violent during the storm.

Albany, N. Y. January 4th.—Until the evening of the 1st, the weather was unusually mild. The river had become clear of ice, but on that evening it began to snow, and we have now a depth of twelve or fourteen inches.

January 8th.—The thermometer at Augusta, Maine, at sunrise was at twenty-two degrees below 0.

Philadelphia, January 18th.—The winter so far has been a remarkable one. Little snow and ice, and comparatively speaking, very little cold weather. For the last two years we have had scarcely any snow. The signs in the fall of this year foretold a very severe winter. Unusually large flocks of wild geese and ducks have been seen in divers places, stretching their unwearied course towards the south. A white bear, (an uncommon occurrence,) was shot near the banks of the Susquehanna early in the winter. Our climate appears to be undergoing a great change, the cause of which for the present we will not attempt to determine. Time and observation will settle it. Some days last week seemed more like days in the spring of the year than in January.

Black River, Ohio, January 10th.—This day, between the hours of 11 and 12 o'clock, A. M. a noise was heard resembling the report of twelve or fifteen horsemen's pistols discharged in very rapid succession. It commenced in a north-west direction, to appearance about the elevation of forty-five degrees, and moved to the south-east, with a sound something like that produced by dragging a heavy log on frozen ground, interrupted at very short intervals with reports like those at the commencement. It was distinctly heard for nearly two minutes, and died away, or travelled out of hearing like a passing thunder storm. The day has been remarkably clear, and not a cloud has been seen in this region. Similar noises were heard at Cleaveland, Ohio, on the same day.

Charleston, S. C. January 19th.—In further proof of the genial sky which still continues at this unusual season, to warm the soil of Carolina, some damson plums are now ripe.

January 20th.—The winter is so mild at Quebec that the St. Lawrence is open.

January 22d and 23d.—The snow fell at Petersburg, Virginia, to the depth of two feet. Two negroes perished in the storm. At City Point the snow drifted in some places to the height of six feet.

Alexandria, D. C. January 23d.—Snow fell to the depth of near six inches.

New York, January 24th.—Since the 21st, a spell of real winter weather has prevailed, but without any snow. On the 22d and 23d there were indications of a fall. To-day it has cleared up, and is extremely cold; the wind blowing fresh from N. W. No snow of consequence appears to have fallen betwixt this and Canandaigua.

Norfolk, Virginia, January 24th.—A fall of snow such as is rarely witnessed so far south, commenced here on the night of the 21st, and has continued with the intermission of a few hours ever since, accompanied with a heavy gale of wind. The ground was frozen, and is covered with snow to the depth of ten inches. Our citizens will have a better opportunity of enjoying the delightful recreation, which gives life and animation to all classes in our northern cities at this season. The mails have been delayed by the inclemency of the storm. The tide yesterday rose to an unusual height, and the cold was very severe.

Richmond, Virginia, January 24th.—The mildest winter experienced here for several years has at last brought us the deepest snow which has fallen for many winters. On the night of the 21st, after 3 o'clock, it began to snow, and continued until the 23d, with very little interruption, and uncommonly fast. The wind blew violently, and of course the snow drifted in many places very high, but its average depth is between one and two feet. Last evening the temperature of the air was cold.

Quebec, January 27th.—The season in this province has hitherto preserved its very mild character. The ice between the north shore and the Island of Orleans became stationary on the 23d, and on the evening of the 24th some carriages came up to town. The ice has since grown firm, and farmers flock to market with their produce, which has been on their hands a month longer than usual.

New York, January 31st.—The weather-wise predicted a furious storm in consequence of the perfect halo of unusual brightness which encircled the moon, nor were they mistaken. The evening of January 30th, set in with a drizzling rain, but before 8 o'clock it changed to snow. A north-east wind began to howl drearily over the city. Until 1 o'clock it blew a gale, and the atmosphere was thickened with snow to an extraordinary degree. The snow falls very rapidly, and is probably from fourteen to eighteen inches deep upon the level ground.

While almost every part of Europe is suffering from the overflowing of rivers, that great source of fertility in Egypt, the Nile, has failed this season in diffusing its waters to the usual extent. A deficient crop of grain it is feared will be the consequence.

In *January*, 1772, there was an uncommon fall of snow in York County, Pennsylvania. On the 27th of that month the snow was three feet and a half deep—a heavy rain then came on, which freezing, formed a thick crust. Nearly every man and boy in the county now turned out to chase deer, for while the hunter could run fleetly on the crust, the poor animals struck through, and from the wounds received in their legs, were unable to proceed far. The consequence was, that (with the exception of a few that were in the mountains, and in the more remote parts of the county,) the race was nearly extirpated.

FEBRUARY, 1825.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	34	40	42	N. E.	Cloudy. Rain at night, and snow three inches deep.
2	32	29	24	N. W.	Cloudy. Ground covered by snow.
3	22	23	24	W., N. W.	Cloudy. } Considerable ice in the river Delaware.
4	17	23	25	S. W., W.	Clear.
5	19	30	33	S. W. fresh.	Clear.
6	28	36	39	S. W.	Clear. Thawing. Delaware full of ice.
7	35	40	41	S. W.	Hazy. Drizzle of rain.
8	31	30	31	N. E.	Cloudy. Sprinkle of snow.
9	22	27	28	N. E.	Cloudy.
10	33	36	39	S. W., N. W.	Cloudy.
11	34	36	36	N. E.	Cloudy. Rain day and night. Some snow that fell on the first, still spread over the country.
12	38	41	44	N. E., N.	Cloudy.
13	38	52	54	N. W.	Clear. Snow all gone, excepting a small quantity in shady places.
14	38	44	46	N. E.	Overcast.
15	36	36	37	N. E.	Cloudy. Small rain.
16	37	42	43	N. E., S. W.	Cloudy.
17	35	44	47	S. E.	Cloudy. Rain.
18	39	45	44	W., N. W.	Clear.
19	35	41	47	N. E., E.	Clear.
20	30	36	37	N. E. fresh.	Cloudy. Snow, hail and rain all night.
21	32	35	35	N. E., N. W.	Cloudy. Sleet.
22	37	36	36	N. E. fresh.	Cloudy. Rain P. M.
23	35	39	39	N. E.	Cloudy.
24	37	41	43	S. E.	Clear.
25	38	42	46	S. E.	Clear.
26	40	37	38	N. E.	Cloudy. Rain.
27	35	36	39	N. E.	Cloudy. Snow.
28	31	34	37	W., S. W.	Clear.

Total rain during the month - - - - 4.91 inches.
Mean temperature - - - - - - 35.99° Fahrenheit.
Increase of heat from last month - - - 1° within a small fraction.
Maximum - - - - - - - 54°
Minimum - - - - - - - 17°
Range of thermometer - - - - - 37°

Hottest day, 13th—Coldest day, 4th.

Comparison with February, 1824.

Mean temperature - - - - - 1.24° greater this year.
Maximum - - - - - - - 7° less.
Minimum - - - - - - - 1° greater.

Boston, Mass. February 1st.—It commenced snowing in the afternoon, and continued with the wind at north-east till dark, in which time but little snow had fallen. During Tuesday night the wind freshened, and by morning blew with much violence, drifted into heaps the falling snow. The tide at the west end of the city rose several feet higher than usual, covering several of the wharves with water, and filling the under part of some of the houses.

Albany, New York, February 1st.—Snow began to fall in this city, and continued all the next day, until it was two feet deep.

Buffalo, Niagara, February 1st.—We have experienced all kinds of weather, from the keen blasts of December to the gentle airs of May, within the present winter months. The lake yet remains open. In the winter of 1819, some of our farmers ploughed in February, and Lake Erie closed about the first of March.

Boston, Mass. February 6th.—During the last month, and a few days past of the present, a great mortality has prevailed among old persons, arising probably from the rapid transitions of the weather from heat to cold, and from the unusual degree of dampness which has at different times pervaded the atmosphere.

Pittsburg, Penn. February 12th.—Our river is on the rise, and is expected to be in fine boating order in a few days. The weather continues remarkably mild.

Reading, Penn. February 17th.—Between the hours of 4 and 5 we experienced several vivid flashes of lightning, accompanied with loud peals of thunder, and rain—wind south-west.

Richmond, Virginia, February 23d.—The shad are appearing very early this year, owing to the mildness of the season. Several have been brought to market.

Detroit, Michigan Territory, February 25th.—We have had very little cold weather; almost no snow, and our river has been open the whole season. The wild geese, the sure harbingers of spring, have already begun to direct their flight northward. Indeed, such a season, even in this comparatively mild climate, has not been seen within the recollection of the oldest inhabitant.

Charleston, S. C. February 28th.—Our winter has been uncommonly mild in temperature, and with the exception of a few days, no ice has been visible. It is true we have had from time to time immense falls of rain, but these most generally cleared away into almost a summer season. At present, therefore, all nature is appearing like spring, and our trees are putting forth their buds. From the previously heated state of the atmosphere, however, an incessant though slight rain ensued on Friday last; it again cleared up warm on Saturday until the evening, when we were visited between the hours of 9 and 10 with a most sudden and violent hail storm. It continued for several minutes with the wind from the north-west, and many of the stones were of the size of pigeons eggs, three inches or more in circumference.

Philadelphia, February 28th.—The prevalence of catarrhs is very general in the city at present. In Boston and New York these complaints are still more prevalent. In Boston it is estimated that one-third of the population, including nearly all the younger part, are at this time labouring under them, and in New York the number is set down at twenty-four thousand.

MARCH, 1825.

DAYS.	FAHRENHEIT'S THERMOMETER. 9 A. M.	12 M.	3 P. M.	WINDS.	WEATHER.
1	36	39	40	N. W.	Clear.
2	36	39	40	N. E.	Cloudy.
3	40	43	44	N. E., E.	Cloudy.
4	41	40	42	N. E.	Cloudy.
5	40	45	46	N., N. E.	Cloudy.
6	42	43	44	N. W. fresh.	Clear.
7	43	46	49	N. E.	Clear.
8	44	45	50	N. E.	Cloudy. Rain.
9	42	43	44	N. E.	Cloudy. Rain.
10	40	44	45	N. W.	Clear.
11	38	50	50	N. E., S. E.	Hazy. Rain at night.
12	53	57	59	N. W., S. E.	Clear.
13	50	59	61	N. W.	Clear.
14	50	59	60	N. E., S. E.	Clear.
15	48	59	61	N. E., S. W.	Clear.
16	45	51	51	N. E., E.	Cloudy. Rain, thunder and lightning at night.
17	58	66	64	S., S. W. a gale.	Cloudy. Clear.
18	56	58	60	N. W. fresh.	Clear.
19	48	54	57	N. W.	Clear.
20	52	60	62	S. W.	Clear.
21	48	48	50	N. W., E.	Cloudy.
22	39	43	44	N., N. E.	Clear.
23	42	48	51	N. E., S. W.	Clear.
24	48	53	55	N. E., S. W.	Hazy.
25	40	40	38	N. E. fresh.	Cloudy. Rain.
26	37	39	39	N. E. fresh.	Cloudy. Rain.
27	46	50	49	N. W. fresh.	Cloudy.
28	37	43	46	N. W. fresh.	Clear.
29	38	45	48	N. W., E.	Clear.
30	41	43	45	S. E.	Cloudy. Large rain, and thunder and lightning at night, and a gale from the S. W.
31	56	62	63	S.W. very fresh.	Clear.

Total rain during the month - - - -	4.29 inches.
Mean temperature - - - - - -	47.80° Fahrenheit.
Increase of heat from last month - - -	11.81°
Maximum - - - - - - - -	66°
Minimum - - - - - - - -	36°
Range of thermometer - - - - - -	30°

Hottest day, 17th—Coldest days, 1st, 2d, and 26th.

Comparison with March, 1824.

Mean temperature - - - - - -	6.05° greater this year.
Maximum - - - - - - - -	11° greater.
Minimum - - - - - - - -	8° greater.

Richmond, Virginia, March 1st.—The long-continued spell of wet weather is almost without example. The sun has scarcely been visible three days for more than three weeks. When it has not rained in showers, a gloomy mist has hung over the earth. If any bright tints have streaked the evening sky, they gave no prognostic of a succeeding fair morning. Rain has taken the place of snow; and our present winter, like the same season in more southern latitutes, is more wet than cold. The earth is saturated with moisture, and the meadows are overflown with rain. James's River is swelled with a freshet, and has already risen over Trent's Bridge.

The weather in *Savannah*, Georgia, has been very severe. On the 3d inst. the tide rose higher than on any occasion since the September gale of last year. Nearly the whole of Hutchison's Island, opposite the city, was overflowed, and a great portion of the lower end of it yet remains under water.

March 4th.—The snow in the neighbourhood of Quebec, has sunk six or eight inches within a few days, but it was still on a level upwards of four feet deep. Yet their journals say they have seldom had finer prospects of an early spring. The unusually mild weather and humid atmosphere of the last month has occasioned at Quebec, as well as in more southern latitudes, very many cases of indisposition from catarrhs and sore throats.

Montreal, Canada, March 5th.—The weather has been for some weeks back so totally different from that which we are accustomed to have in this part of the country, that it has considerably affected the health of the inhabitants, colds, sore throats, rheumatisms, and all the train of maladies engendered by a damp atmosphere, have seized a great portion of the population. At least three thousand persons have been taken ill within the last ten days. The weather is now rapidly improving, an easterly wind seems to have dissipated the chill haze which enveloped us, and a warm sun is quickly melting the condensed snow and ice that covers our pavement.

Essex County, New York, March 6th.—About 2 o'clock in the morning a shock was felt in this town, supposed to be an earthquake. In Brookfield the shock was much more severe. We have since learned from the town of Lewis, that it proves to have been a volcano. We understand that there is a mountain there, whose bowels of stones and earth have been thrown out to the depth of a hundred feet, and that smoke was seen to issue from the centre for three days afterwards. A similar eruption took place there several years ago.

Havana, Cuba, March 8th.—The late and present rains are unparalleled in the remembrance of the oldest inhabitants. Last week we had a fall of hail, the only one since that noted forty-two years ago, and I picked up several as large as the tip end of my little finger.

March 10th.—Lake Erie is now entirely open, and so free of ice that navigation could not in the least be impeded by it, a circumstance very rare at so early a day. The average time of its opening for the last six years has been from the 6th to the 10th of May—ten months later than the present season. The whole winter has been so mild that very little ice has been formed, and that was too thin to withstand the approach of spring.

Brownsville, Indiana, March 10th.—The weather has for some weeks past been so generally warm, as to interfere very seriously with the calculations of the farmers and others who devote their attention to sugar-making.

Lancaster, Penn. March 17th.—About 2 o'clock this city was visited by a hail storm from the north-west, accompanied by lightning, thunder, and rain. It lasted about fifteen minutes. The hail at first were small, but increasing in size as the storm continued. Hail stones picked up after the storm was over, measured from three and a half to four inches in circumference.

Harrisburg, Penn. March 18th.—The drought for the last three weeks has been very injurious to the wheat and rye in the stiff limestone soils. A month ago our farmers were apprehensive that their grains were so forward as to be liable to injury by frost when in blossom; but the late dry and cool weather has been so unfavourable to vegetation, that it is not probable that they will be in blossom this spring earlier than they generally are.

Boston, Mass. March 19th.—A very mild winter has thus far been succeeded by a very early spring; and on the evening of the 17th we were visited by a summer thunder shower, accompanied with vivid lightning. The operations of agriculture have actively commenced. The robins, blue birds, and other songsters of the spring have renewed their carols, and the wild fowl have taken their annual flight to the north.

The 20th of March, 1760, the thermometer was at from five to ten degrees below 0. The winter of 1775–6, was a much milder one than the last.

Salem, Mass. March 23d.—Such was the state of the atmosphere, that at meridian, the moon in its first quarter, and the very brilliant planet, Venus, nearly in conjunction, were distinctly visible to the naked eye, and attracted the curiosity of a large number of persons. The sun was in his full splendour, and in the same quarter of the heavens in which the planets were visible.

Harrisburg, Penn. March 24th.—The spring trade never commenced so early. Arks, rafts, and boats, have been passing down the Susquehanna for the last ten days or two weeks, carrying the wheat, flour, pork, whiskey, &c of the vast country watered by this river and its branches to market.

Boston, Mass. March 26th.—The thunder gust which passed over the city last week, and was accompanied in this hyperborean clime by a warm rain, is stated to have poured down hail-stones in New York as large as musket balls, and at Pittsburg, Penn.: further south hail which measured from three and a half to four inches in circumference.

Norristown, Penn. March 29th.—We have ice one-fourth of an inch in thickness. At 6, A. M. the thermometer was as low as twenty-six degrees.

As a striking evidence of the unusual mildness of the past winter, the Susquehanna river, at Havre de Grace, has not been closed the whole season.

APRIL, 1825.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	45	49	51	N. W.	Clear.
2	40	41	42	N. E. fresh.	Cloudy.
3	34	36	40	N. E., N. fresh.	Cloudy. Snow.
4	48	57	62	N. W.	Clear.
5	56	62	64	N. W., E.	Clear.
6	49	57	60	N. W.	Hazy.
7	53	57	58	N. W.	Clear.
8	51	57	59	N. E., S. E.	Clear.
9	52	63	66	S. W.	Clear.
10	58	64	61	S. W., N. W.	Hazy. Cloudy. Rain.
11	52	65	68	W., N. W.	Clear.
12	50	51	49	W., S. W.	Clear.
13	47	51	52	N. W.	Cloudy.
14	47	54	52	N. W., N. E.	Cloudy.
15	50	56	58	N. E., S.	Clear.
16	54	68	65	S. W.	Clear.
17	60	59	68	S. W.	Clear. Cloudy. Drizzly.
18	61	68	71	N. W.	Clear.
19	57	59	54	N. E.	Cloudy. Small rain.
20	48	50	52	N., N. W.	Cloudy.
21	42	45	46	N. W.	Clear. Ice made at night of the thickness of a dollar.
22	54	61	64	N. E.	Clear.
23	55	64	67	N. W.	Clear.
24	54	59	59	N. E.	Hazy. Clear.
25	46	52	58	N. E.	Cloudy.
26	57	67	68	N. W.	Hazy. Clear.
27	60	63	64	W., S. W.	Clear. Cloudy. Sprinkle of rain.
28	53	56	59	N. E.	Cloudy. Rain. Thunder and lightning.
29	64	70	71	S.	Cloudy. Clear. Small rain.
30	58	63	63	S. W. fresh.	Clear.

Total rain during the month	1.2 inches.
Mean temperature	56.11° Fahrenheit.
Increase of heat from last month	8.31°
Maximum	71°
Minimum	34°
Range of thermometer	37°

Hottest day, 29th—Coldest day, 3d.

Comparison with April, 1824.

Mean temperature	1.45° greater this year.
Maximum	3° less.
Minimum	7° less.

Richmond, Va. April 4th.—We have never before witnessed so strange a phenomenon at this season of the year as a snow. The verdant grass, the budding trees, the blooming flowers, are in singular contrast with this gloomy habiliment of winter. On the 2d instant a considerable change took place in the temperature of the atmosphere, and a cold rain drenched the earth till about two o'clock, when large flakes of snow began to fall. The heavy flakes fell near two hours, when it began to descend in finer particles, occasionally mixed towards the close of the evening, with a drizzling rain. It continued to fall till eleven or twelve o'clock at night. Had not the earth been very well moistened with rain, the snow would have fallen to a greater depth. It was almost three inches. The heat of the sun yesterday dissipated nearly every vestige of it.

Hudson, N. Y. April 7th.—A brilliant aurora borealis was visible in the evening. It continued some time after midnight.

West Chester, Penn. April 13*th.*—Spring has commenced unusually early. The fields and meadows present as lively a green as is generally exhibited the beginning of May, and the grain is luxuriant and promising in a high degree.

Pottstown, Penn. April 15*th.*—There is a field of rye in this neighbourhood, which will be in heads in the course of a week. Some of the stalks are two feet ten inches in length, and in perfect head at present.

Salem, Mass. April 23*d.*—Very sudden changes have taken place in the temperature of the weather during the last week. In the course of a few hours the thermometer fell from the point of summer heat to six degrees below freezing point, and on the 21st, ice of the thickness of an inch was found in this vicinity. No rains have fallen since the opening of the month.

Greensburg, Penn. April 25*th.*—The prospect of a great abundance of fruit of every description never was more cheering than during the present spring. On the night of the 22d, however, our fine prospects, so far at least as it regards the peaches and plums, were blasted by frost. The beautiful blush of the peach blossom, is changed to the withered, haggard appearance of the dried rose leaf.

April 25*th.*—New Orleans has literally been flooded with rain. The streets have ceased to be passable for carriages, and business of all kinds has been at a stand for a day or two.

MAY, 1825.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	62	64	63	S. W.	Clear. Cloudy.
2	52	56	58	N. W.	Clear.
3	58	56	58	S. W., S.	Cloudy. Small rain.
4	50	50	49	N. E., E.	Cloudy. Rain.
5	54	70	72	S. W., N. W.	Clear. Wind fresh from N. W.
6	54	61	63	N. W.	Clear.
7	63	72	71	N. W.	Clear.
8	60	68	70	N. E., S. W.	Clear.
9	60	65	66	E., S. W.	Clear.
10	58	66	67	N. E.	Clear.
11	56	60	61	N. W.	Clear. Cloudy. Drizzly.
12	56	61	62	S., S. W.	Clear.
13	56	60	66	N. E.	Clear.
14	59	65	67	S., S. E.	Clear.
15	62	66	70	S. E.	Clear.
16	62	68	68	S. E.	Overcast. Rain at night.
17	63	63	67	S. E.	Cloudy. Rain. Distant thunder and lightning.
18	64	70	73	S. W.	Clear.
19	70	71	72	S. W.	Clear.
20	63	70	70	N., N. W.	Clear.
21	64	64	66	S. W.	Cloudy.
22	66	70	73	N. E., S. W.	Clear.
23	65	72	74	S. W.	Clear. Overcast.
24	69	75	77	S.	Cloudy.
25	75	81	79	S. W.	Clear. Cloudy. Smart rain and considerable thunder and lightning.
26	63	70	74	N. W.	Clear.
27	68	71	74	S. W.	Clear.
28	70	76	80	S., S. E.	Clear.
29	68	71	72	N. E.	Clear.
30	68	70	71	S. W.	Clear.
31	70	73	74	S., S. E.	Clear. Cloudy.

Total rain during the month - - - -	1.64 inches.
Mean temperature - - - - -	65.91° Fahrenheit.
Increase of heat from last month - - -	9.80°
Maximum - - - - - - -	81°
Minimum . - - - - - -	49°
Range of thermometer - - - - -	32°

Hottest day, 25th.—Coldest day, 4th.

Comparison with May, 1824.

Mean temperature - - - - -	1.58° greater this year.
Maximum - - - - - - -	1° greater.
Minimum - - - - - - -	2° less.

Pennsylvania, May 1*st.*—Spring with her gaudy, but beautiful covering, has once more decked the fields with verdure, and the gardens and orchards with blossoms and flowers. The forests, too, are bursting from the bondage of the winter's frost, and throwing up their various buds and blossoms to the sun in the same splendid profusion that distinguishes an American forest in the autumn. The more hardy oak and hickory have already put forth, while those trees which are less cautious in exposing their buds to the severity of an April frost, are full in blossom. The orchards of peach, cherry, and apple trees, have mostly shed their blossoms, leaving the promise of a plentiful season. Grain of every kind looks uncommonly well, but the wheat crop in particular uncommonly promising.

May 2d.—There was a fall of snow at Boston, and ice in the vicinity at night.

Lycoming County, Penn. May 4th.—We have had frost for the last three or four nights, and to-day a fall of snow. It commenced snowing between 10 and 11, A. M. and continued for four hours. The ground and trees are completely covered with it, and the country has all the appearance of winter.

Salem, Mass. May 6th.—Winter may be truly said to "linger in the lap of May." The past week has been gloomy and chilly, and more uncomfortable than at any time during the past winter. On the 3d we had a slight fall of snow, and on the night of the 5th a fine rain, of which vegetation stood much in need. It still continues unusually cold. In Pittsfield, on Friday morning last, the ground was covered with snow.

Washington City, D. C. May 8th.—After a very warm day, was visited by a heavy thunder storm, accompanied by such violent wind that several of the large poplars at the eastern end of Pennsylvania Avenue suffered materially. One large tree was entirely uprooted.

New Orleans, May 9th.—About 1 o'clock the brig Crown, while lying a few miles below the English turn, was struck by lightning.

Washington, Penn. May 10*th.*—Between 5 and 6 o'clock in the evening a very violent and destructive storm of hail, rain, and wind, accompanied with thunder and lightning, passed from the north-west over this town and vicinity. In its course the garden vegetables and fields of grain were cut up and laid prostrate, almost beyond recovery, and the fruit which had been spared by the previous spring frosts, were chiefly destroyed. Of the hail we saw none larger than a musket ball, although from the accounts of our country friends, we suppose some fell there the size of large hickory nuts. The thick showers of hail were almost irresistible, forced as they were, with the violence of a hurricane. As is usual with hail storms at this season of the year, it was not of great breadth.

Bellefont, Penn. May 11*th.*—About 12 o'clock, M. a large circle, combining all the beautiful colours of the rainbow, was observed in the heavens, encircling the sun.

Easton, Md. May 14*th.*—The Hessian fly is making its accustomed ravages upon the hopes and the labours of our farmers. It is said to be unusually injurious this season; whole fields are laid waste and irrecoverably gone.

Charleston, S. C. May 15*th*—During a severe storm of thunder and lightning, accompanied by a heavy fall of rain, a house in Price's Alley was struck by lightning. The brig Eugene, lying in the stream, was also struck by lightning, which partly melted the conductor, and separated it in many places. The vessel was uninjured, but the mate who stood near the mast was knocked down, he soon however recovered. The ship Franklin had her royal mast shivered to pieces; and the flag-staff of the mariner's church was also struck.

May 16*th.*—The Susquehanna and Juniata are unusually low, and have been so for a month past.

Chambersburg, Penn. May 17*th.*—A violent and destructive hail storm, accompanied by vivid and incessant lightning, loud thunder, and torrents of rain, passed over this borough. It came from the west, and was about two miles wide, and extended a distance of ten or twelve miles before it exhausted its fury. The hail was from the size of a musket ball to that of a hulled walnut, and fell in sufficient quantity to cover the ground. In the whole course of this storm, the rising crops of grain have been generally injured, and on some farms entire fields totally destroyed. On the 19th, some of the hail was still to be seen. Such was the violence of the storm that there are fruit trees which will bear marks of it for some time; small birds were found in the streets killed by the hail.

May 18*th.*—A most tremendous hail storm occurred in Butler County, Penn. north of Harmony, which prostrated trees, buildings, and fences, and destroyed property of various kinds. Some accounts of the violence of this storm almost exceed credibility.

Nottaway County, Va. May 19*th.*—About 5 o'clock in the afternoon, the most destructive and violent gales of wind and hail which ever happened here, prostrated our corn, wheat, and cotton fields. The horrors of it were severely felt, and its effects are lamentably visible. At times, the wind and hail were distressingly violent, bringing with them such floods of rain, that we cannot perceive how the dwelling houses resisted their fury. The size of the hail was that of a partridge egg—the ground was entirely covered with it, and where it had drifted up against logs and fences, it was from eighteen to twenty-four inches deep.

Bucks County, Penn. May 20*th.*—A fine rain has given vegetation a fresh start, and our farmers are satisfied that the prospect of heavy crops will be realized.

Fredericksburg, Va. May 24*th.*—About sunset, during an extremely broad and vivid flash of lightning, accompanied by severe thunder, a heavy fall was heard upon deck by the passengers in the cabin of the steam-boat Washington, and in a few seconds the helmsman came in a manner "*doubled up,*" down the companion, and fell like a log of wood lifeless upon the floor. His eyes appeared fixed and glazed, and for some time it was apprehended that the poor fellow was indeed dead, but he revived, and in an hour entirely recovered. His account was, that without seeing any lightning, he was driven by an unknown power from the wheel of the vessel against one of the lateral iron rods of the platform on which he stood, was then precipitated forward, and recollected nothing more.

Philadelphia, May 25*th.*—There was a thunder storm this evening; a man in the streets was killed by the lightning.

Bucks County, Penn. May 31*st.*—The late refreshing rains have contributed very much to the promising appearance of vegetation; and there will be an abundant yield of wheat, rye, Indian corn, oats, and flax. The Hessian fly and grub worm have been entirely innoxious to the crops of wheat and corn in this country.

The Neshamony and other streams of running water are unusually low.

JUNE, 1825.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	70	71	72	S., S. E.	Cloudy. Fine rain at night.
2	71	76	77	N. W.	Cloudy. Clear.
3	66	71	72	N., N. E.	Overcast.
4	59	59	60	N. E.	Cloudy. Rain. A gale from the N. E. all day and night.
5	60	60	63	N. W., fresh.	Cloudy. Rain. A severe gale.
6	70	74	75	N. W.	Clear.
7	77	82	83	W., N. W.	Clear.
8	79	83	84	S. W., W.	Clear.
9	81	84	85	S. W.	Clear.
10	78	84	86	S. W.	Clear.
11	80	86	87	S. W.	Clear. Atmosphere electric at night.
12	85	88	88	W.	Clear. Cloudy. A squall P. M. Showers with moderate thunder and lightning.
13	79	82	83	N. W.	Clear.
14	73	76	78	N. W., W.	Clear.
15	74	78	79	S. W., S.	Clear. Hazy.
16	78	82	78	S. W., N. W.	Clear. Cloudy. Sprinkle of rain.
17	75	77	79	N. E., S.	Clear.
18	71	72	73	S., S. E.	Cloudy. Hard showers.
19	76	82	85	S. W.	Clear.
20	80	84	86	S. W.	Clear.
21	80	86	87	S. W.	Clear. Air electric at night.
22	80	82	82	N. W.	Clear.
23	71	74	77	N. W.	Overcast. Clear. Sprinkle of rain at night. Air electric.
24	71	72	74	N. E.	Cloudy. Clear. Rain.
25	72	74	80	S. E., S. W.	Cloudy. Clear. Fine shower.
26	74	76	76	N. W.	Clear. Flying clouds.
27	71	74	78	N. E., S. E.	Clear.
28	69	70	76	S. E.	Cloudy. Clear. Hard shower with lightning and thunder.
29	72	76	77	N. W., S. W.	Clear.
30	72	77	78	E., S. E. fresh.	Clear. Hazy.

Total rain during the month - - - -	3.34 inches.
Mean temperature - - - - - -	76.49° Fahrenheit.
Increase of heat from last month - - -	10.58°
Maximum - - - - - - -	88°
Minimum - - - - - - -	59°
Range of thermometer - - - - -	29°

Hottest day, 12th—Coldest day, 4th.

Comparison with June, 1824.

Mean temperature - - - - -	2.99° greater this year.
Maximum - - - - - - -	The same.
Minimum - - - - - - -	1° less.

Harrisburg, Penn. June 1st.—Abundant rain has imparted new vigour to vegetation. The fruits of the earth promise to be most plentiful.

Wilkesbarre, Penn. June 4th.—Large rains have cooled the earth, and the appearance of fruit, as well as the various crops, is very flattering. We have not heard of a single instance of an attack upon the wheat, corn, or other crops, by the fly or worm in this county.

Norfolk, Va. June 6th.—It is uncommon to hear of violent storms and hurricanes on any part of our extensive continent in the month of June: but we have to notice a visitation of stormy weather, which commenced about nine o'clock on the night of the 3d instant, rarely if ever equalled. The storm of the 3d of September, 1821, was perhaps rather more violent, but it lasted only three or four hours, while this continued with undiminished violence for about twenty-seven hours. It commenced raining early on the morning of the third, and continued without any intermission the whole of that day. The wind at the commencement of the storm was at N. E. and so continued until about twelve o'clock on the 4th, when it began to haul round gradually to the northward and westward, and held up at S. W. Sheltered as Norfolk is from northerly and easterly winds, neither the town, nor the shipping in the harbour suffered much from the fury of the tempest; a few fences blown down, trees uprooted, and gardens spoiled, comprise the whole of its ravages; but considerable damage was done by the tide, which rose at least eighteen inches higher than it was ever known to be within the last forty years.

Portsmouth being more exposed, the effects of the gale were more severely felt on that side.

Alexandria, D. C. June 6th.—The summer has set in cold. On the 4th it was so exceedingly uncomfortable with a heavy N. E. wind and rain, that fires were indispensable all day.

June 6th.—At half past ten o'clock at night, two distinct shocks of an earthquake, following each other in quick succession, were felt in the town of Augusta, Maine. They were accompanied with considerable noise. At half past twelve there was another shock, more severe than the first. Buildings were sensibly jarred, and glasses jingled where they stood in contact. These shocks were also felt in Hallowell, and in Waterville, Gardiner, and Wiscasset.

Wilmington, Del. June 7th.—The prospect of the crops of winter grain in the surrounding country is remarkably fine.

Richmond, Va. June 7th.—After nearly three days of rain, a hurricane blew up from the N. W. on the morning of the 4th, and continued till night. Many trees were torn up by the roots, the atmosphere was chilled, and fires were kindled in the houses.

June 7th.—The thermometer was four degrees higher at Norwich, Connecticut, than at any time during the whole summer of last year.

Boston, Mass. June 7th.—The thermometer ranged as high as 90° in the shade, and on the 8th it was one or two degrees warmer.

Quebec, June 9th.—The thermometer was up to 91°. On the 10th it reached in the shade 95°. At Niagara on the same day the thermometer was up to 90°.

Montreal, June 10th.—In the evening a very violent thunder storm happened. The rain, which descended in torrents, was strongly impregnated with sulphur.

Philadelphia, June 11th.—A large and brilliant circle was seen around the sun, which remained for two or three hours.

New York, June 12th.—About five o'clock in the afternoon a tremendous thunder gust occurred just above the Highlands. The rain, and hailstones which were as large as walnuts, fell in frightful torrents. The storm appears to have spent its fury within narrow limits, as little or nothing of it was felt below the Highlands. Since that time we have experienced a great change of weather. A similar storm of hail and rain happened at New London on the evening of the 12th, and lasted until one o'clock at night.

Harrisburg, Penn. June 13th.—The last week has been oppressively warm. Hay harvest has commenced a week earlier than usual, and from appearances, wheat and rye will be fit for the sickle sooner than it has ever been known in this climate.

New York, June 13th.—The mercury in Fahrenheit's thermometer has ranged since the 6th between 80° and 90°, night and day, and in some positions reached 94° or higher. On the 11th and 12th steady at 89°. Some lively breezes, and a damp atmosphere from distant rains, have fortunately abated the intenseness of the heat; a number of persons, however, have fallen victims to it. The mercury stood at 82° in Wall street, where it rose to that degree only once the last season. At Boston, on Friday afternoon, it was 95°, and at Albany on Saturday afternoon at 94°, and at Providence 89°. At Hartford the mercury was at 95°. There had been plenty of rain, and the fields never looked finer.

Greensburg, Penn. June 17th.—Our farmers are busily engaged in putting up a plentiful crop of hay. This year the harvest will be over at least ten or twelve days sooner than usual. The fruits of the earth will be uncommonly abundant.

Salem, Mass. June 18th.—The weather was extremely hot last week.

Quebec, June 19th.—A meteor was observed in the evening, a little before nine o'clock, in the north-eastern part of the heavens. The air was serene and the sky cloudless; the night previous had been remarkable for very loud thunder, and a heavy shower of rain, accompanied by a violent gust of west wind, succeeding upwards of a fortnight's dry weather. The thermometer stood at 58° of Fahrenheit. Although it was in the dusk of the evening, and the moon shone, such was its brilliancy that it threw a shadow from the objects around. The direction of its motion was at an angle not far removed from a perpendicular to the horizon, and it advanced from S. W. to N. E. Its brilliancy increased as it moved, and when at an angle of about fifteen or twenty degrees above the horizon, it burst into a number of stars of a deep red colour. It was unattended with any noise, and was visible about twice as long as a shooting star. No heavenly bodies could be distinguished at the time, other than Venus, the moon, and one or two stars of the first magnitude.

Bucks County, Penn. June 20th.—As the summer advances, the prospects of the farmer brighten. The crops of grain generally will be heavy. The few peach trees here will bear but a slender quantity; the late and severe frosts have nipped the fruit in the bud. Apples will be scarce—grapes plenty.

Mifflintown, Penn. June 25th.—In consequence of the extreme drought for the last six weeks, the spring crops are much injured; indeed some fields of oats are almost destroyed. Vegetation is generally checked in its growth, and in some places completely parched. Streams are unusually low.

The quantity of rain which fell in New Orleans from the 1st of June, 1824, to the 1st of June, 1825, was 107 inches.

JULY, 1825.

DAYS.	FAHRENHEIT'S THERMOMETER. 9 A. M.	12 M.	3 P. M.	WINDS.	WEATHER.
1	74	78	79	N. W., W.	Clear. Cloudy.
2	74	72	73	S. E.	Cloudy. Sprinkle of rain.
3	75	75	77	S., S. W.	Cloudy. Sprinkle of rain.
4	75	78	79	W., S. W.	Clear. Overcast.
5	77	80	80	S. W. fresh.	Clear. Cloudy. Sprinkle of rain.
6	73	78	79	N.W., S.W. fr'h.	Clear.
7	74	74	76	N. W.	Cloudy.
8	70	75	77	N. E., E.	Clear.
9	73	78	82	S. W, fresh.	Clear.
10	78	85	86	S. W. fresh.	Clear.
11	82	86	89	S. W.	Clear.
12	83	89	90	S. W.	Clear.
13	82	84	86	N. W.	Clear.
14	77	78	79	N. E., E.	Overcast. Cloudy. Drizzle of rain at night.
15	73	77	81	N. E., E.	Clear.
16	76	82	83	N. W., W.	Clear.
17	80	84	87	N. W., S. W.	Clear.
18	80	86	89	N. E., S. E.	Clear.
19	83	88	89	S. W.	Clear.
20	82	87	90	S. W. fresh.	Clear.
21	84	90	91	S. W. fresh.	Clear.
22	86	89	90	S. W.	Clear.
23	84	90	91	S. W.	Clear. Cloudy. Sprinkle of rain. Distant thunder and lightning.
24	82	86	88	S. W.	Clear. Moderate shower at night.
25	77	78	76	N. E.	Cloudy. Small rain.
26	73	78	80	N. W.	Clear.
27	71	76	78	N. E.	Clear.
28	72	78	81	N. E., E.	Clear.
29	74	79	82	S. W. variable.	Clear.
30	72	78	82	S. W., S. fresh.	Clear.
31	72	78	82	S.W. fr'h. N.W.	Clear. Cloudy. Moderate showers. Distant thunder.

Total rain during the month, - - -	1.96 inches.
Mean temperature, - - - - - -	80.37° Fahrenheit.
Increase of heat from last month, - -	3.88°
Maximum, - - - - - -	91°
Minimum, - - - - - -	70°
Range of thermometer, - - - -	21°

Hottest days, 21st, 22d, and 23d—Coldest day, 2d.

Comparison with July, 1824.

Mean temperature, - - - - -	4.04° greater this year.
Maximum, - - - - - -	7° greater.
Minimum, - - - - - -	2° greater.

Beaufort, S. C. July 5th.—The present appearances of the coming crops of Sea Islands are very gloomy. The heavy winds and incessant rains have very materially injured them.

Dover, N. H. July 10th.—At 3 P. M. the thermometer in the shade stood at 97°. On Monday at noon, it was 94°—at 2 P. M. at 99° under the shade of a tree. On the same day at Portland, Maine, at two o'clock the thermometer was at 93°, and at sunset 91°. In the evening there was much sharp lightning; and about ten o'clock a smart shower.

New Haven.—On the 10th at three o'clock the thermometer stood at 90°, exposed to a free current of air, and unaffected by any other cause than the heat of the atmosphere. At three o'clock on the 11th it was at 92°; and in New York the mercury in some situations in the shade was as high as 89° and 91°.

New Bedford, July 11th.—The thermometer stood at 90° before sunrise, and about noon at 95°.

July 10th.—The harvest commenced this season full ten days earlier than usual in every part of the United States.

Boston, July 13th.—The mercury in the thermometer in the coolest situation for several days, has ranged from 90° to 97° and even to 100° of Fahrenheit, and when exposed to the sun has risen to 120°. Many of the citizens have fallen victims to the hot weather in consequence of drinking cold water. It is unprecedented in our annals, and has thrown a melancholy gloom over our city.

Providence, R. I. July 13th.—The excessive heat was fatal to the fish in Brush pond in Cranston. This pond is about three acres, and the water between two and three feet in depth, yet so intense was the heat that all the fish therein were suffocated. Several hundred perch, &c. were found floating on the surface of the water, and large quantities were taken from the bottom without any signs of life.

Salem, July 13th.—Some of our thermometers in the shade are as high as 104°, and on the 11th and 12th at Newburyport, they were at 95° and 98°.

July 13th.—A violent and destructive tornado, accompanied with a shower of hail, passed over Cushing, Maine. Crops, cattle, barns, windows, fences, and trees, were destroyed or levelled by the force of the hail and wind. Its course was from N. W.

Hartford, Conn.—On the 12th, 13th, 14th, and 15th, the thermometer ranged from 96° to 102° in the shade. Such excessive hot weather has rarely, if ever prevailed here before.

New York, July 21st.—For the last three days the mercury has been upwards of 90° in the shade, nor has it fallen much in the night. Vegetation is parched up—the leaves of the few trees scattered through the city are burned crisp and brown—the hammer of the mechanic moves languidly—cattle and horses pant in the sun or fly to the shade, and indeed an almost insupportable degree of lassitude pervades the whole animal world.

Philadelphia, July 21st.—Besides the accounts received of the fatal effect of heat on men, on horses, and on fish, we learn that some of the feathered tribe have become its victims. The swallows which inhabit the large ship-house at the navy yard, are daily dropping down dead among the workmen below. The thermometer stands thus:—

In the commandant's office, - - - - -	98°
In the ship-house near the roof, - - - -	106°.

Washington City, July 22d.—Two o'clock, P. M. the thermometer was at 96°, when an agreeable thunder gust came on, and reduced it to 82°, being a difference of 14° in less than two hours.

Staten Island, N. Y. July 23d.—The thermometer stood at 92° at eleven o'clock, A. M. A fresh breeze came in from sea shortly afterwards, and by twelve o'clock the thermometer was at 78°, having fallen 14° in the space of an hour.

Baltimore, July 23d.—A severe thunder storm with copious showers of rain has produced a sudden and agreeable cooling in the atmosphere.

New York, July 25th.—To-day a slight rain with a continuation of a clouded sky, has relieved us from the intolerable heat.

Nantucket, July 25th.—The heat of the weather for a fortnight has been very great, and the whole season uncommonly dry. For the last two months, with the exception of one violent shower on the 21st of June, the aggregate quantity of rain which has fallen on this island, has not exceeded an inch in depth. Many of the streets are filled to the depth of a foot with sand and dust, pulverized to an impalpable powder, that rises upon the sluggish atmosphere, threatening suffocation to man and beast. Vegetation is completely checked.

July 30th.—For more than a year spots on the sun have been very frequent, but one of the magnitude of that now visible on the disk of that luminary is seldom seen. It is easily discovered by the eye protected by a dark glass, without the assistance of a telescope. This spot entered upon the disk about five days since.

West Chester, Penn. July 31st.—The parched earth was refreshed with a plentiful shower of rain, accompanied with intense thunder and lightning, and some hail.

July 31st.—A violent thunder storm charged with hail occurred at Newburyport, Mass. and at West Newbury a tremendous hail storm. It went in a vein not more than three-quarters of a mile wide, from W. N. W. to E. S. E. The hail-stones were as large as pigeon's eggs, and of all conceivable shapes.

The long-continuance of the heat this summer is remarkable, and it has been generally felt over the continent. It is a peculiar circumstance, that the greatest intensity of heat occurred to the north and east of us.

In consequence of this extreme hot weather, complaints of the stomach and bowels have been more frequent among adults and children than is common; also inflammation of the eyes, brain, and apoplexy, and the sudden deaths occasioned by drinking cold water have been frightful.

The dysentery prevails very extensively in various parts of the state of Maryland, and on the 10th of July at Montreal, one hundred and sixty children were buried in the French burying ground, whose deaths were occasioned by diarrhœa and dysentery.

The weather in Jamaica in July was extremely and unusually boisterous—thirteen days incessant rain and gales of wind, and a terrible hurricane spread desolation over some of the West Indian islands.

AUGUST, 1825.

DAYS.	FAHRENHEIT'S THERMOMETER. 9 A. M.	12 M.	3 P. M.	WINDS.	WEATHER.
1	76	80	82	N. W.	Clear.
2	71	71	73	N. W.	Cloudy. Fine showers before daylight.
3	70	74	76	N. W.	Clear.
4	72	76	80	N. W., S. W.	Clear.
5	73	77	80	N. E., S. E.	Clear.
6	74	79	82	S. W.	Clear.
7	75	81	84	S. W.	Clear.
8	77	80	86	S. E.	Clear.
9	75	80	85	S., S. W.	Cloudy. Clear. Fine shower A. M. Shower P. M. Thunder and lightning. Air electric at night.
10	78	80	84	S. W., N. W.	Clear.
11	72	71	71	N. E.	Cloudy. Drizzle of rain.
12	70	74	78	N. E.	Clear.
13	73	77	81	S. W. fresh.	Clear.
14	81	86	87	W., S. W.	Clear. Air electric at night.
15	78	84	88	W., S. W.	Clear.
16	84	88	89	N. E., S. E.	Clear. Light rain at night. Distant thunder.
17	76	77	74	N. E. fresh.	Cloudy. Moderate rain.
18	67	66	66	N. E. fresh.	Cloudy. Rain. } Abundant.
19	63	61	60	N. E. fresh.	Cloudy. Rain.
20	66	72	68	E. fresh, N. E.	Cloudy. Rain.
21	64	66	67	N. E., N.	Cloudy. Rain at daylight.
22	67	70	71	N., N. W.	Flying clouds.
23	70	75	77	N. W., E.	Clear.
24	75	79	83	E., S. E.	Clear.
25	80	82	84	N. W.	Clear.
26	78	81	82	N. E. fresh.	Clear.
27	71	74	76	N. E.	Clear.
28	70	75	77	S. W. fresh.	Clear.
29	71	75	76	N. W.	Clear.
30	72	76	80	N. W., S. W.	Clear.
31	73	81	83	S., S. W. fresh.	Clear.

Total rain during the month, - - - 3.69 inches.
Mean temperature, - - - - - 75.91° Fahrenheit.
Decrease of heat from last month, - - 4.46°
Maximum, - - - - - - - 89°
Minimum, - - - - - - - 60°
Range of thermometer, - - - - 29°

Hottest day, 16th—Coldest day, 19th.

Comparison with August, 1824.

Mean temperature, - - - - - 3.25° greater this year.
Maximum, - - - - - - - 6° greater.
Minimum, - - - - - - - 4° less.

Mifflintown, Pa. August 6th.—Owing to the long-continued drought, the crops of corn in this vicinity have entirely failed; being literally burnt up.

Bucks County, Pa. August 8th.—The long and dry spell of hot weather has been ruinous to corn and the second crops of hay. Grass has suffered severely, and though we have been favoured with a few smart rains, yet it will require more to change the sun-burnt garb of nature to its natural lively hue of green.

Auburn, N. Y. August 10th.—The intolerable atmosphere of fire, which caused so much repining and suffering a short time since, has of late become more temperate and congenial to our feelings. But the air has been so long charged with electric matter, that nothing short of a severe thunder storm could be expected to restore its purity and elasticity. On the seventh, a tremendous thunder storm, accompanied with vivid lightning, passed directly over our heads. The clouds were soon dispersed, after discharging a torrent of rain.

August 13th.—An excessive and destructive drought, prevails in the greater part of Amherst and Nelson counties, Virginia. In many places there has been no rain to wet the earth, since the 1st of June. Vegetation is parched up. Many cornfields will not produce the seed, and the tobacco looks equally unpromising.

Baltimore, August 17th.—The thermometer rose to 95½°, and on the fifteenth, at half past 5 P. M. to 96¼°; being higher than it had been at any other time this season. On the sixteenth, at eight o'clock, it was 89°, and at two o'clock, 94°. The atmosphere, during the late hot weather, has been exceedingly clear and free from vapours; so much so at one time, that at 12, M. the moon, in her last quarter, about 45° from the sun, and a star still nearer, were distinctly seen. Although there have been clouds almost every day, they do not appear to have mingled in the atmosphere generally, but to have concentrated into distinct bodies. May not the state of the atmosphere have contributed largely to the high degree of heat experienced, by permitting the sun's rays to reach the earth in all their pristine fervour? And may not this be the cause, also, of the almost entire absence of all diseases of a bilious kind, notwithstanding the warm weather.

August 20th.—A smart shock of an earthquake was felt in Falmouth, Jamaica.

St. Johns, N. B. August 20th.—It is painful, and indeed alarming, to notice the scarcity of water in this city. We never have witnessed such a season. All the wells, both public and private, are dry. Not a cask of water can at this time be purchased, and unless we are blessed with rain shortly, we fear that the consequences will be serious.

Kingston, U. C. August 21st.—About twenty minutes past five o'clock in the morning, a brilliant rainbow was observed in the sky in the direction of S. W. and N. E. forming a complete semicircle with the horizon.

Lancaster, Pa. August 26th.—The banks of the Conestoga are at present lined with dead fish; produced, no doubt, by the extraordinary heat, or some impurity in the water, owing to the immense quantity of vegetable matter which is now in the river.

The yellow fever prevails in the cities of Mobile, Alabama, and New Orleans, Louisiana.

The heat in Europe, during June and July, was almost as oppressive as it was in the same months in America. In London, the thermometer ranged 86°, and in Paris it has been as high as 95°, and at Ghent the heat was almost insupportable.

SEPTEMBER, 1825.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	68	71	73	N. W. fresh.	Clear.
2	66	70	72	N. W., S.	Clear. Thermom. 56° at 6 A. M.
3	64	69	71	N., S. W.	Clear. Overcast. Thermom. 58° at day light.
4	63	66	69	N. W., N. E.	Clear. Thermom. 56° at 6 A. M.
5	64	69	73	N. E., S. E.	Clear. Flying clouds. Thermom. 52° at sunrise.
6	67	70	74	E., S.	Clear.
7	70	76	76	S. W., S. by E.	Clear. Overcast. Thermo. 58° at sunrise.
8	64	66	64	N. W.	Cloudy.
9	63	68	69	N. W.	Clear. Thermom. 52° at sunrise.
10	58	62	66	N. W. fresh.	Clear. Thermom. 50° at sunrise.
11	62	66	68	N. W., S. W.	Clear. Thermom. 47° at sunrise.
12	64	70	73	S. W. fresh, S.	Clear. Thermom. 52° at daylight.
13	70	74	79	S. W. fresh.	Clear.
14	72	78	78	S. W.	Clear. Cloudy. Small shower.
15	72	79	80	S. W.	Clear.
16	70	73	73	S. E. fresh.	Cloudy. Hard showers. Thunder.
17	69	73	73	N. E.	Cloudy. Smart showers.
18	66	71	72	N. W.	Clear.
19	63	70	71	N. W.	Clear.
20	68	75	78	S. W. fresh.	Clear.
21	60	61	66	N. E.	Cloudy. Smart shower at night.
22	66	69	74	N. E.	Cloudy. Clear.
23	70	75	76	E., S. E.	Cloudy. Clear. Small rain at night.
24	74	77	78	N. W. fresh.	Clear.
25	55	57	61	N. W., N. E.	Cloudy. Thermom. 52° at 6 A. M.
26	58	64	66	N. E.	Cloudy. Thermom. 56° at 6 A. M. Rain at night.
27	61	64	65	N. W.	Cloudy.
28	58	63	65	N. W. fresh.	Clear. Thermom. 51° at sunrise.
29	57	66	67	E., S. E.	Clear. Thermom. 48° at daylight.
30	61	65	69	S. W. fresh.	Clear. Thermom. 50° at 7 A. M.

Total rain during the month	3 inches.
Mean temperature	68.43° Fahrenheit.
Decrease of heat from last month	7.48°
Maximum	80°
Minimum	55°
Range of thermometer	25°

Hottest day, 15th—Coldest day, 25th.

Comparison with September, 1824.

Mean temperature	2.10° greater this year.
Maximum	2° less.
Minimum	3° greater.

September 2d.—Frost occurred in some parts of the state of Massachusetts, which injured the tender plants. In Quebec, on the same day, there was ice the eighth of an inch in thickness.

Augusta, Me. September 3d.—For several weeks past there has been very little rain. The earth was dry to a considerable depth. Vegetation was withering under a burning sun; and to finish the gloomy picture, the woods for a great distance around us in numerous places, have been on fire for more than a week. The atmosphere was filled with smoke. Objects could not be seen at a great distance in the day time. The woods are also extensively on fire along the Penobscot. A smart thunder shower, however, on the night of the 31st ultimo, in a few minutes extinguished all the fires, and completely purified the atmosphere.

Camden, N. J.—On the morning of the 9th and 10th there was considerable white frost in the country, so as to check the growth of some of the tender species of vegetables, sweet potatoe vines, &c.

New Orleans, September 10th.—The weather has been unusually cool and dry for the last few days. The Mississippi is now within a few inches of the lowest stage of the water, and the Ohio is nearly in the same way.

Philadelphia.—On the 10th and 11th a white frost was apparent on all the low grounds in the vicinity of the city.

Annapolis, September 13th.—A comet is now visible every clear morning. On the 12th it was observed about 2 o'clock in a direction some degrees east of the Pleiades.

Norristown, Penn. September 14th.—For several mornings past we have had white frosts and cool weather. The frost was not so heavy as to injure the buckwheat.

Petersburg, Va. September 19th.—There was a white frost in the morning. As indicative of approaching cold weather, the wild pigeons are more abundant in this vicinity than they were ever before known.

New York, September 21st.—A brilliant comet may be seen every clear evening after 11 o'clock. It is situated in Taurus, making nearly an equilateral triangle with Aldoberan, and the Pleiades to the westward of them. The tail is long and luminous, which is as usual opposite the sun.

September 23d.—An earthquake was experienced at Port Spain, Trinidad, the shock of which was so severe that it shook down several houses. The same shock was felt at Granada.

September 29th.—The White Mountains of New Hampshire were covered with snow for the first time this season.

OCTOBER, 1825.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	60	67	69	N. W.	Clear.
2	65	74	75	W., N. W.	Clear.
3	61	71	73	S. E.	Overcast.
4	71	75	71	S. W.	Cloudy. Rain.
5	70	75	78	S. W.	Cloudy. Rain.
6	71	76	78	S. E., S.	Clear.
7	68	75	77	N. W.	Clear.
8	69	70	70	W., N. W.	Clear.
9	71	73	68	S. E.	Cloudy.
10	63	70	74	S. E.	Overcast.
11	70	72	73	S. W.	Cloudy. Light showers.
12	56	62	62	N. E.	Flying clouds.
13	57	61	62	N., N. W.	Clear.
14	59	63	64	N. W.	Clear.
15	68	69	70	W., S. W.	Clear.
16	61	66	69	S. E., W.	Clear.
17	47	51	53	S. W.	Clear.
18	44	46	47	N., N. E.	Overcast.
19	41	45	49	N., N. E.	Clear.
20	46	49	52	W., S. W.	Clear.
21	52	56	52	W., N. W.	Clear.
22	40	46	49	N. E.	Cloudy. Clear
23	49	54	67	N. E.	Clear. Cloudy.
24	52	56	56	S. E., S.	Overcast.
25	44	49	51	N. E.	Clear.
26	52	65	68	N. E., S.	Cloudy. Clear.
27	67	69	69	S.	Cloudy. Rain.
28	42	49	45	N. W.	Clear.
29	41	48	49	N. W.	Clear.
30	46	59	60	S. W., S.	Cloudy. Clear.
31	48	54	58	W., N. W.	Flying clouds.

Total rain during the month - - - -	1.22 inches.
Mean temperature - - - - -	60.47° Fahrenheit.
Decrease of heat from last month - -	7.96°
Maximum - - - - - - -	78°
Minimum - - - - - - -	40°
Range of thermometer - - - - -	38°

Hottest day, 6th—Coldest days, 19th and 22d.

Comparison with October, 1824.

Mean temperature - - - - -	3.47° greater this year.
Maximum - - - - - - -	8° greater.
Minimum - - - - - - -	2° greater.

St. Augustine, October 2d.—A tremendous gale occurred about 2, A. M. It blew with the greatest force from the N. E. the surf breaking against the houses, and the streets swimming in water. In a short time the wind shifted to the S. E. and the gale moderated. The houses have been much damaged, and all the oranges are gone.

The same gale prevailed at Darien, Georgia. The tide rose uncommonly high, covering many of the swamp plantations in the neighbourhood.

Montreal, October 6th.—The autumnal season in Canada has always been celebrated for the beauty and serenity of the weather; but the present autumn has exceed all others, not only for its uniform mildness and salubrity, but for its uncommon warmth. The weather has been as hot as it generally is in the month of June. Every day of the present month has been extremely warm, the thermometer frequently rising above 80°.

October 7th.—There have been very extensive fires in the woods in the state of Maine for some weeks past. The country for thirty miles in extent on the Penobscot, appears like "a sea of fire." In the vicinity of the heaviest fire, the ground actually trembled, and the roaring of the flames, which sounded like thunder, was heard at the distance of twelve or fifteen miles. Hawks and other birds were killed by the heat, and at some parts of the river the fish did not escape. Bass of from twenty to forty pounds, and salmon, shad, and trout were found dead in shoal waters.

Boston, Mass. October 8th.—A most remarkable change has taken place in the atmosphere since yesterday. The mercury in the thermometer stood at 84° at 2 o'clock. The wind at midnight changed to the N. E. and the mercury at half-past one to-day stood at 61°. Accompanying the cold east wind, came a large cloud of smoke, which has given a peculiarly brassy hue to external objects. It is extremely penetrative, and affects the nostrils and eyes, producing a very sensible, smart and slight inflammation: it is quite difficult of respiration. The smoke is supposed to proceed from the extensive fires in the woods.

Carlisle, Penn. October 8th.—A comet has been visible in the southern heavens for some nights past. It is travelling fast to the south, and will soon disappear from our hemisphere. This comet is inferior in brightness and size to the one which appeared in 1811, nor can we discover in it even with the aid of a telescope any definite or distinct nucleus or body. It presents to the eye a mass of undefined matter, illuminated by a dusky fumid light. Its perihelion, or nearest distance to the sun is within the orbit of Mercury, while its aphelion or greatest distance extends nearly to the orbit of Jupiter.

It is worthy of remark that on the 7th inst. no less than four planets, viz. Jupiter, Mars, Venus, and Mercury, were all in the same sign, and the three first not many degrees apart. They all rose about 3 o'clock in the morning, following each other in a train.

Washington City, D. C.—*October 9th* was the darkest Indian summer day we have seen for several years.

Uniontown, Penn. October 9th.—A rainbow appeared at sunrise. The first bow was in places unusually bright, and was composed in one place of six concentric arcs of red, in other places five, and most parts of three. The second bow, or water-bow as it is sometimes termed, was quite as singular, having two brilliant and reversed arcs of colours.

Philadelphia, October 14th.—Strawberries of a second crop are in market.

Buffalo, Niagara, October 17*th.*—The first snow made its appearance to-day. It was preceded by the flight of wild geese.

October 17*th.*—A severe gale of wind, with snow, was experienced at Erie, Penn. and it was feared much property was lost in the lake.

Harrisburg Penn. October 18*th.*--The mountains are covered with snow, and a piercing north-wester prevails.

Huntingdon, Penn. October 18*th.*—The earth is covered with snow at this place.

Raleigh, N. C. October 19*th.*—We were greeted with frost for the first time this season. Before the present week the weather was very mild. It is now clear and cold, and health rides upon the breeze.

Petersburg, Va. October 21*st.*—During the whole of the past week, the mercury in the thermometer ranged from 70° to 80° and the weather was hot and oppressive. On the morning of the 18th there was a keen northern blast, with a cloudy atmosphere, and for about half an hour a most untimely sprinkling of snow.

Mount Carbon, Penn. October 21*st.*—This season has on the mountains been marked with great extremes of temperature and weather. We had not a drop of rain for months, and then it rained in torrents. We had excessively hot weather, and then very cold. A week ago it was oppressively warm, now it is pinching cold, and the north-wester of the 18th and 19th was as piercing and severe as any during last winter.

Alexandria, D. C. October 24*th.*—The excessive drought which has prevailed throughout the past summer, is without a parallel in this part of the country.

Canada.—Although the high mountains in the lower province were covered with snow as early as the 22d of September, the weather from the 1st to the 6th of October was unusually warm at Quebec. The thermometer on the 6th having risen to 80°.

Quebec, October 26*th.*—Snow fell for the first time to the depth of nearly three inches.

NOVEMBER, 1825.

Reading, Penn. November 8*th.*—For the last seven or eight days the weather has been very mild, much resembling the month of May.

Boston, Mass. November 19*th.*—A large flock of wild geese passed over the city pursuing their course to the south. This is a strong indication of the setting in of winter. The thermometer this morning was at less than 20° above zero.

November 20*th.*—Above Schenectady the canal is partly closed with ice, and on Sunday morning the ground was covered with snow at Albany, New York.

Boston, Mass. November 22*d.*—Snow fell the greater part of to-day.

November 24*th and* 25*th.*—At Montreal it snowed almost incessantly, and at Quebec sufficient snow had fallen to make the winter roads excellent.

New York, November 29*th.*—It is quite cold at Albany—the canals being closed, and the rivers choaked with ice; but here we have yet a mild and genial atmosphere.

NOVEMBER, 1825.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	46	56	57	W., S. W.	Clear.
2	47	55	54	N. W., W.	Clear.
3	42	47	48	N. W.	Clear.
4	41	50	51	W., N. W.	Clear.
5	43	55	56	S. W.	Cloudy.
6	49	68	70	S. W.	Cloudy. Clear.
7	51	59	60	S. E., E.	Overcast.
8	47	56	58	N. W., S. W.	Cloudy. Clear.
9	50	50	48	N. W.	Clear.
10	39	46	46	N., N. W. fresh.	Overcast.
11	38	44	49	N. W.	Clear.
12	39	47	47	N. W.	Clear.
13	51	58	57	S. W.	Clear.
14	45	48	46	S. E., S. W.	Cloudy. Rain.
15	41	47	48	E., S. E.	Flying clouds.
16	42	45	46	W.	Cloudy. Light rain.
17	41	43	47	W., N. W.	Clear. Overcast.
18	32	36	34	N. W. fresh.	Clear.
19	30	33	35	N. W.	Clear.
20	37	40	46	N. W.	Clear.
21	38	42	42	N. W., W.	Clear. Cloudy.
22	39	43	47	S. W.	Overcast.
23	33	39	39	W., N. W.	Clear.
24	37	41	43	W., S. E.	Cloudy.
25	38	42	43	S., S. E.	Cloudy.
26	34	40	42	N. W.	Clear.
27	38	47	48	W., S. W.	Overcast. Clear.
28	37	41	46	S., S. W.	Clear.
29	37	45	49	S. W., N.	Flying clouds.
30	43	47	46	N. E.	Cloudy. Rain.

Total rain during the month, - - -	1.41 inches.
Mean temperature, - - - - -	45.37° Fahrenheit.
Decrease of heat from last month, - -	15.10°
Maximum, - - - - - -	70°
Minimum, - - - - - -	30°
Range of thermometer, - - - -	40°

Hottest day, 6th—Coldest day, 19th.

Comparison with November, 1824.

Mean temperature, the same within a small fraction.

Maximum, - - - - - -	8° greater this year.
Minimum, - - - - - -	1° less.

DECEMBER, 1825.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	46	49	50	N. W.	Cloudy. Rain.
2	48	50	50	N. W.	Clear.
3	42	46	45	N. W.	Cloudy. Rain.
4	40	45	41	N. W.	Cloudy. Rain.
5	32	38	37	N., N. W.	Clear.
6	27	31	33	N. W.	Clear.
7	35	39	40	N. W.	Clear.
8	32	37	39	N. W.	Clear.
9	48	50	47	W., S. E.	Overcast.
10	31	33	33	N. W.	Clear.
11	29	32	34	N., N. W.	Clear.
12	26	27	26	N. W. fresh.	Clear.
13	12	14	15	N. W. fresh.	Clear.
14	20	27	31	W., N. W.	Overcast. Clear.
15	32	38	41	S. E., W.	Flying clouds.
16	36	43	45	S. W.	Cloudy. Rain.
17	52	56	55	S. W.	Cloudy. Rain.
18	41	46	46	S., S. W.	Overcast.
19	35	36	36	S. W.	Cloudy. Rain.
20	34	38	35	N. W., W.	Clear.
21	26	29	30	N. W.	Clear.
22	27	27	28	N., N. W.	Clear.
23	19	21	26	N. E., N.	Clear.
24	26	29	31	E., S. E.	Flying clouds.
25	42	43	46	S. W.	Cloudy. Rain. Foggy.
26	29	34	30	W., N. W.	Clear.
27	25	33	33	N. W.	Clear.
28	30	31	41	N. W., S. E.	Clear.
29	33	36	34	N. E.	Cloudy. Rain.
30	38	38	40	N. E.	Cloudy. Rain.
31	40	42	42	N. E.	Cloudy. Rain.

Total rain during the month, - - -	3.60 inches.
Mean temperature, - - - - - -	35.90°
Decrease of heat from last month, - -	9.47°
Maximum, - - - - - - -	56°
Minimum, - - - - - - -	12°
Range of thermometer, - - - -	44°

Hottest day, 17th—Coldest day, 13th.

Comparison with December, 1824.

Mean temperature, - - - - -	3.35° less this year.
Maximum, - - - - - - -	5° less this year.
Minimum, - - - - - - -	16° less.

Quebec, December 1*st.*—It is a singular fact that the river is now perfectly open, and that there is not a piece of floating ice to be seen. So extraordinary is the mildness of the weather, that the buds of the lilac are bursting into leaf, and the early trees are as much advanced as they usually are at the end of March.

Mount Carbon, Penn. December 2d.—The weather continues remarkably fine, though the river and canal are encumbered with ice.

Norristown, Penn. December 7th.—The present uncommon drought which exists in this place and vicinity, prevails in every section of the county. Many springs and stream which heretofore afforded an abundant supply have failed. Almost every well in this borough is now dry. No rain of consequence has fallen since August last. Schuylkill river at present is remarkably low.

December 12th.—There was a snow storm at Norfolk and Richmond, Virginia. At the latter place the ground was covered with snow to the depth of three or four inches.

Providence, R. I.—December 13th was the coldest day experienced here for the last four years. The thermometer was at 13° below zero at 7 A. M. and at 4° below at 10 the same evening.

December 14th.—At Boston, Mass. the mercury fell 4° below zero—20° colder than at any time last winter. The Connecticut river is closed with ice at Middletown. At Albany the mercury fell to 6° below 0.

New Jersey, December 17th.—The whole country has been suffering for weeks under the effects of an oppressive drought. The springs are in many places either entirely or almost dry. The cold of this week has increased the difficulty.

The temperature of the whole year was dry and hot. The summer was remarkably so, and some sections of the state have suffered considerably by the drought; but although the crops have not been abundant as usual, we had reason to rejoice in the almost total disappearance of the fevers which had afflicted the country for three preceding years.

The spring of the year 1825 was the coolest, and the summer the hottest that has occurred for many years. If all the hopes of our farmers have not been realized, they have still cause to be thankful, that no *serious deficiency in the products of the year* has happened.

Corn was scarce, owing to the dry weather. Wheat generally good, fair in quality and quantity. The crops of rye, oats, and hay, tolerable; not however so abundant as common. The oats in particular deficient. Pasture, in the spring, rich and fine: the very dry and hot weather injured it in the summer and fall. Peaches scarce, and of an inferior quality. Apples very bad. An almost total failure in some places, in consequence of the late frosts in the spring, and drought in the summer. All other fruits generally not so fine as usual. Green peas moderate. Potatoes very poor and scanty. They sold, during the fall, at one dollar a bushel in the city. The present singular deficiency is, no doubt, attributable to the state of the weather in August and September. Fall turnips large and abundant. Our winter vegetables, celery, cabbage, ruta baga, beets, radishes, &c. pretty good.

Result of all the Meteorological Observations made on Tinicum Island in the year 1825.

Months.	THERMOMETER.						Number of Fair days.	Number of Cloudy days.	Depth of Rain.	Prevailing Winds.	Prevailing Weather of each Month.
	Mean Temperature.	Maximum.	Minimum.	Range of Thermom.	Hottest days.	Coldest days.					
January	35.02°	47°	20°	27°	16th	30th	17	14	1 69-100	N. W., S. W.	Fair, dry and mild.
Feb.	35.99	54	17	37	13th	4th	8	20	4 91-100	N. E., S. W.	Cloudy, wet and disagreeable.
March	47.80	66	36	30	17th	1st, 2d, 26th	15	16	4 29-100	N. E., N. W.	Cool, wet and unpleasant.
April	56.11	71	34	37	29th	3d	20	10	1 2-100	N. W., N. E.	Fair, pleasant and dry.
May	65.91	81	49	32	25th	4th	24	7	1 64-100	S. W., S., S. E.	Very fair, dry and warm.
June	76.49	88	59	29	12th	4th	18	12	3 34-100	S. W., N. W.	Hot, moist and favourable to vegetation.
July	80.37	91	70	21	21st, 22d, 23d	2d	23	8	1 96-100	S. W., N. W., N. E.	Very hot, dry and fair.
August	75.91	89	60	29	16th	19th	21	10	3 69-100	N. E., S. W., N. W.	Moderate, fair and agreeable.
Sept.	68.43	80	55	25	15th	25th	20	10	3	N. W., S. W.	Fair and moderate, cool.
October	60.47	78	40	38	6th	19th, 22d.	17	14	1 22-100	N. W., N. E., S. W.	Dry and fair.
Nov.	45.37	70	30	40	6th	19th	16	14	1 41-100	N. W., S. W.	Dry, moderate and pleasant.
Dec.	35.90	56	12	44	17th	13th	16	15	3 60-100	N. W.	Cold and variable.
							215	150	31 77-100	N. W., S. W.	

Prevailing winds of the year, N. W., S. W.
Total rain of the year, 31 77-100 inches.
Hottest month, July.
Coldest month, February.
Greatest range of thermometer occurred in December, 44°.
The mercury was the highest July, 21st and 23d, 91°—lowest, December 13th, 12°.
Thunder and lightning occurred in sixteen days.
Mean temperature of the year, 56.98°.
Mean temperature of 1824, 55.36°.

MEDICAL EDUCATION AND INSTITUTIONS.

ART. XIV. *Account of the Hôtel Dieu at Paris.* By ELISHA BARTLETT, M. D. of Lowell, Mass.

WHILE a resident at Paris in 1826 and 1827, I had in contemplation the publication of a small volume devoted to some account of the medical institutions of that city. Preparatory to my departure to France, I felt the necessity of something of this kind—of some work which should not only contain a more detailed and correct account of the medical establishments of Paris than is to be found in this country, but which should also serve in some degree as a guide and directory to the American medical student, while pursuing his studies in the French capital. These considerations induced me, while there, to make some researches and to gather materials with reference to this object; but want of time precluded the possibility of investigations sufficiently extensive to justify *making a book.* Should they be deemed, however, of sufficient interest to the profession, it will give me pleasure to see them in the American Journal. They will contain a condensed historical notice of the principal hospitals, statistical tables showing the number of patients, the kinds of diseases, and the rate of mortality, and brief personal sketches of a few of the most distinguished surgeons. In addition to the motives which led me to *collect* these materials, it may be added that the number of Americans who annually resort to the French metropolis for the purpose of completing their studies—the important and signal improvements which have been made by the great men of Paris in every department of our science during the present century—the achievements of such men as BOYER, LARREY, MAGENDIE, DUPUYTREN, and ROUX, have created a deep and progressive interest in whatever occurs in that city in relation to medicine and surgery, which induces me to offer the following facts and observations for publication, with the hope that they may not prove unacceptable to the intelligent and inquisitive members of the profession.

The present paper will be devoted to a notice of the *Hôtel Dieu.*

This hospital is the oldest and one of the most extensive of Paris. The period at which it was founded is not known: but it must have been very remote, as we find it spoken of so early as 829. The history of this institution from its commencement down to 1793, presents a frightful picture of suffering, and an appalling table of mortality. Like other and similar establishments, it unquestionably had for its noble object the relief and mitigation of human suffering and disease among the unfortunate and indigent, but its history proves that for hundreds of years, indeed till within a comparatively short period, the evil produced by it was incalculably greater than the good. To be carried to the Hôtel Dieu was almost equivalent to a sentence of death. The causes are obvious in the situation and administration of the hospital. Five or six patients were not unfrequently placed in the same bed—diseases of every description were indiscriminately thrown together—the beds or straw, as the case might be, on which the patients lay, were excessively filthy—the rooms were in the same situation, and badly ventilated—so that apart from the medical treatment which the patients received, we have sufficient cause for the great portion of deaths of those who entered the hospital.

Some idea may be formed of the situation of the Hôtel Dieu, from the record of the first royal donation which it received. This was as late as 1228. It was made by Philip Augustus, then king of France, in the following words. "We give to the House of God, situated before the grand church of the very happy Mary, *all the straw* of our chambers and of our house at Paris, each time that we shall quit the city to go to sleep elsewhere."

The following extract is from a report made in 1816, to the council general of hospitals, on the ancient state of the Hôtel Dieu.

> "The beds were heaped together in the wards, and the patients were heaped together upon the beds. There were often four and sometimes six placed in the same bed. The administrators themselves of this establishment, in a memoir published in 1767, and their predecessors more than a century before, in 1661, had stated the same facts in an account given of this hospital. They were seen even on some occasions, to place the patients one above another, by means of hammocks, which they ascended by a ladder. The government, uninfluenced by the solicitations of the friends of humanity, remained insensible to so many evils. Chamaussit, Duhamel, Petit, &c. had earnestly but in vain insisted on the necessity of removing the institution to some more salubrious quarter of the city, or of changing and reforming its actual administration, when, in 1786, a memoir was published on the urgent and pressing necessity of an immediate removal. It proposed the construction of four hospitals without the barriers of the city, to which the patients from the Hôtel Dieu should be removed. Louis XVI. ordered the Academy of Sciences to make a report on the state of the hospital, and the following are some of the results relative to its mortality compared with that of La Charité. In fifty-two years, dating back from the time of the report, the number of deaths out of 1,108,741 admitted into the hospital, was 244,720—one to each four and a half. The mortality at La Charité, during the same period, was

one in seven and a half; from which it appeared that the Hôtel Dieu in these fifty-two years, deprived France of 99,044 citizens, which she would not have lost, had this hospital been as well situated and as wisely administered as La Charité. This loss, which for the fifty-two years, was 1906 each year, was about *one-tenth* of the whole annual loss of the city.

"The king ordered the proposed plan to be carried into effect, and in a prospectus invited the citizens to concur with him by gifts and subscriptions in this work of benevolence. A generous emulation was created among all classes, and considerable sums were collected for the execution of the work. This was violently opposed by the administration of the hospital; and the state of the finances and precursors of the revolution, dissipated the amount of some millions of francs, and defeated the enterprize. At this period there were 1994 beds, while the mean number of patients was 2500 and the extreme number from 5 to 6000: so it was still necessary to continue the murderous usage of putting two, three, and even four patients together, who should poison each other by their mutual emanations, and the sick, the dying, and the dead, were often laying in the same bed beside each other.

"The Hôtel Dieu continued in this deplorable situation till 1793, and it is only from this period that the institution may date its reformation. The plan of building the four hospitals without the city was abandoned—the buildings in the neighbourhood of the Hôtel Dieu, which prevented a free circulation of air about the hospital, were demolished—the wards considered unhealthy were closed—new ones were added, and the number of beds in each diminished—the windows were extended down to the floor, and thus a free ventilation procured—the most scrupulous attention was paid to the removal of filth and the preservation of cleanliness, and the patients according to the nature of their diseases, were distributed in separate halls, or conveyed to other hospitals."

Such is a succinct history of this, the oldest and one of the most interesting hospitals of Paris. It is situated on both sides of the branch of the Seine, forming the southern boundary of the island of the Palace, and is irregular in its structure and the arrangement of its interior. This is the case with most of the French hospitals, as the greater part of them are established in buildings formerly used as prisons, churches, or convents, so that we seldom meet here that beauty of architectural proportions, which distinguishes many of the hospitals of Holland, England, and the United States. The portico which forms the entrance to the Hôtel Dieu is modern, and exhibits a fine specimen of the massy and simple elegance of the Grecian Doric.

This hospital has been, since its reformation, not only a place of refuge and relief for the unfortunate sick and wounded, but a valuable school for the study and advancement of that divine art whose succours are gratuitously afforded to its inmates. There are evils connected with its location in the centre of a great and active capital which are irremediable, but every thing which the wisest internal regulations, and the assiduous services of talented and illustrious professional men can do in effecting its benevolent intentions, has been carried into execution, and faithfully attended to. The halls are vast, clean, well ventilated, and not crowded with beds. The number of these is 1262, of which 674 are appropriated to men, and 588 to women. The number of wards is twenty-three. The two surgical halls for men are in a line, on the second floor, and are usually attended, one by DUPUYTREN and the other by BRESCHET. The female ward is under the care of SANSON. During the clinical course of Dupuytren, the three wards are visited by himself in succession, in order to embrace in his course every variety of disease existing in the hospital. All patients, wounded and sick, are received at the Hôtel Dieu, excepting infants, incurables, mental alienations, lying-in women, and individuals attacked with venereal or chronic affections.

M. Dupuytren, the surgeon in chief, says the improvements which have been made in the administration and regulation of the hospital, have rendered it one of the most salubrious in the capital. The sight and the smell are no longer disagreeably affected as they formerly were—those adynamic fevers rarely occur, which the air, charged with concentrated putrid miasm, formerly developed in so great numbers—and hospital gangrene is seldom seen; the course of clinical surgery sometimes closing without a single instance of this affection. The operation of the trepan practised in those cases where its employment is indicated, and under circumstances which are not beyond all resource, succeeds as well as other operations, and fails only from analogous reasons. In return, and probably on account of the precautions taken to favour the free entrance and circulation of air in the hospital, there occurs a great number of inflammations. In effect, pleurisies, pneumonias, and peritonitis have increased, in the same proportion that putrid and malignant fevers, gangrenes, &c. have diminished, and a great proportion of the deaths which occur in the surgical wards, are occasioned by these inflammatory affections. Every individual who has died in the halls of surgery for several years has been examined after death, and the surgeons of the Hôtel Dieu are convinced, as DESAULT often said, without being able to furnish proof of it, that a great majority of deaths which occur during the treatment for surgical affections, are occasioned by internal inflammations, and that in most cases these inflammations exist to the number of two, three, or four in the same subject. This observation has not been lost sight of in the treatment of the surgical diseases. Refrigerants and diaphoretics have almost universally superseded the use of tonics, and general and local bleedings have taken the place of excitants and stimulants. There is hardly a single pound of cinchona given internally, and a few pounds used for external applications, for nearly three thousand patients received and treated annually in the surgical wards of this hospital.

Fractures are nearly all treated by position—some of them, such as those of the neck of the femur and humerus solely in this manner; the others by position, aided by apparatus, designed rather to prevent motion than to act with force upon the limbs. Continual extension is used in no case whatever. The frightful apparatus formerly used for the reduction of fractures and dislocations, has been totally banished, and has given place to milder methods. Operations for strangulated hernia are done at the moment the patients are received. The operation for cataract is uniformly by couching, and is always performed at the bed of the patient, by which the inconveniences and danger of moving them after the operation is avoided.

The observations on the treatment at this establishment will be concluded by a few remarks on that adopted by some of the physicians in the halls of medicine, and these remarks are applicable to most of the other hospitals of Paris. Many of the physicians still adhere to the ancient notions of pathology, and adopt the opinions of BROWN in relation to the employment of tonics and stimulants. Others advocate the principles and follow the practice of the *reformer*, BROUSSAIS, the great chief of physiological medicine. Employing in almost every case, diet, demulcent drinks, local and general bleedings, baths and emollient applications; they proscribe the greater part of the other therapeutic agents. Both parties appeal to the success of their practice as proof of its correctness, and in confirmation of the soundness of the principles on which it is founded.

The visits are made before breakfast, early in the morning. Those of Baron Dupuytren commence at seven o'clock in the winter, and an hour or two earlier in the summer. At eight he begins his clinical lecture in the amphitheatre, which continues one hour. After which the operations are performed by himself or one of the other surgeons. Then follows the gratuitious consultations and advice to persons not in the hospital. The visits, lectures, and operations of Dupuytren are attended by a great number of students.

Statistical Table, from the Annual Report of 1822.

	Number of Beds—Medicine.	Surgery.
Men	398	151
Women	388	63

	MEN.			WOMEN.			Total general for 1822.	Total general for 1821.
	Med.	Surg.	Total	Med.	Surg.	Total		
In the hospital, Jan. 1, 1822.	318	142	460	322	58	380	840	810
Admitted during the year -	4,288	1,767	6,055	3,879	755	4,634	10,689	11,663
Dismissed - -	3,664	1,605	5,269	3,118	686	3,807	9,076	9,448
Deaths - - -	685	154	839	786	65	851	1,690	1,685
Remaining 31st of Dec. 1822 -	257	150	407	297	59	356	763	840
Rate of mortality, one for - -	6.72	12.39		5.34	12.50			
Mean number of days in the hospital - - -	7	12		5	12			

The ages which gave the greatest number of patients were for the men, from fifteen to forty years; for the women from fifteen to thirty-two.

The cures in medicine were catarrhs, diarrhœas; continued, bilious, and gastric fevers; inflammations of the stomach, peritoneum, and pleura; rheumatisms, and recoveries after delivery.

The deaths, aneurisms of the aorta, apoplexies, pulmonary catarrhs, catarrhal and adynamic fevers, cancers of the uterus, tubercular phthisis, peritonitis, and pneumonias.

I have given the table for 1822, because it is more minute and circumstantial than those which have since been made. In subsequent reports, the medical and surgical patients are not separately given in distinct tables, and as the difference in the mortality of the two classes is very considerable, any inference drawn from the *average* mortality could not be relied on, and must consequently be less important and interesting. The report of 1822 may be taken as a pretty correct example of the actual population and proportionate mortality of this hospital.

The following is a list of the surgical operations performed the same year at the Hôtel Dieu. Nearly all the important operations during my attendance at the hospital, were by Dupuytren. The operations for stone are performed by the three surgeons successively, each one operating differently from the other. The object of this arrangement is to test practically the advantages or disadvantages of each of the three methods. That of Dupuytren is the bi-lateral—of Breschet the old lateral, and of Sanson the recto-vesical.

Surgery of the Hôtel Dieu for the year 1822.

Obstetric cases	5
Vaccinations	9
Setons	59
Incisions for opening abscesses, boils, &c.	254
Paracentesis abdominis	5
Hydrocele by injection	6
—— by incision	2
Empyema	1
Extraction of foreign bodies	4
Fissures of the anus	6
Fistula lachrymalis	45
—— in ano	5
—— recto-vaginal	2
—— vesico-rectal	1
Section of the sterno mastoid muscle	1
Hare-lip	4
Trepan	1
Cataract	62
Extirpation of eye	2
Reduction of uterus	4
—— of rectum	2
Artificial anus	2
Ligature of radial artery	1
—— of femoral artery	1
Cauterizations for hæmorrhages, bites, &c.	19
—— for cancer of skin	11
—— for neck of uterus	3
Fractures of cranium	5
—— of lower jaw	3
—— of sternum	1
—— of ribs	29
—— of pelvis	5
—— of clavicle	21
—— of scapula	2
—— of arm	24
—— of forearm	16
—— of radius	27
—— of cubitus	5
—— of metacarpus	1
Fractures of thigh (body of bone)	24
—— of thigh (neck of bone)	26
—— of leg	41
—— of tibia	16
—— of fibula	18
—— of patella	4
—— of calcaneum	2
Lithotomy (men)	4
—— (women)	2
Removal of stone from urethra	2
Sarcocele	4
Phymosis	5
Paraphymosis	2
Introduction of catheter	180
Amputation of arm	3
—— of forearm	2
—— of fingers	5
—— of thigh in the articulation	1
—— of thigh	2
—— of leg	7
—— of toes	2
—— of tumours of breast and other parts of the body, encysted tumours, &c.	88
Amputation of penis	1
Strangulated hernias	18
Hernias reduced	15
Extraction of bone	4
Rupture of ligament of patella	1
—— of the tendo-achilles	1
Luxation of lower jaw	4
—— of clavicle	3
—— of humerus	14
—— of elbow	5
—— of fingers	2
—— of femur	3
—— of knee	1
—— of patella	1
—— of foot	1
—— of metastarsus on the tarsus	1

I shall close this article with a short and necessarily imperfect sketch of Baron Dupuytren, the surgeon in chief, and the most distinguished of Paris, and perhaps of the world. He is now fifty years of age. He has a noble and striking physiognomy, strongly indicative of his original and vigorous intellect. The general contour of his head, and the outline of his features bears considerable resemblance to the portraits of Napoleon. His manner varies exceedingly with the *mood* in which he happens to be. He is generally grave, and his manner rather cold and forbidding. But he is not always the lion, and he is never more interesting than when indulging, as he often does, his talent for playful humour and raillery. He never appears to enjoy himself so much as when detecting a falsehood in the answers of his patients, and in stripping off the veil of equivocation and evasion to discover the truth. When he is inclined to be irritable, these reluctant and unsatisfactory replies seldom fail to put him in a passion, and he can then only be appeased by simple and direct answers. Some anecdotes are told of him, which partake of the most cold-blooded cruelty; but in following his visits for several months, I have never seen any thing of the kind, and it may be believed that those related of him are exaggerated, or that the irritating and provocative circumstances on the part of the patient have been kept in the back ground. Certainly no man can be more winning in his manners, more insinuating in his address, than Dupuytren when he chooses to be. I have never seen a man, who, by the fascination of his manner, and the admirable adroitness of his conversation, could so readily calm the fears and quiet the apprehensions of a patient when about to submit to an operation. I have seen a child fourteen years old, talking and laughing with him, when actually placed on the table and tied for lithotomy.

In regard to his professional character and merits, they are too well known and universally appreciated to require any notice. Notwithstanding the boldness and hardihood of many of his operations, no surgeon in the capital is so much distinguished for his caution and *prevoyance.* He examines diseases carefully and minutely, is quick in his conception, and wonderfully correct in his prognosis, which he seems fond of giving. The extreme uncertainty of the success of any considerable operation in the French hospitals, and the frequency of the fatal termination of such cases, have taught him a degree of prudence, which, to one not aware of these circumstances, might seem excessive and unnecessary. He always watches for the most favourable situation of the patient, before performing any important operation, and delays it so long as a single symptom remains which appears unfavourable, and which may be removed.

His manner as a lecturer is different from that of most of the Paris professors; excepting at times, he makes use of but little gesture, and he is generally wanting in animation. He sits loungingly in his chair, the end of his thumb between his lips, and speaks low and lazily. This is always the case at the beginning of a lecture. Frequently, however, he grows animated, becomes more interested in his subject, and speaks with more energy. He is then a model for a lecturer—always articulates distinctly and deliberately, and is celebrated for the correctness and polish of his language, and the elegance of his pronunciation.

Lowell, Massachusetts, April 5, 1828.

REVIEW.

Art. XV. *Pathological and Practical Researches on the Diseases of the Brain and the Spinal Cord.* By John Abercrombie, M. D. Fellow of the Royal College of Physicians of Edinburgh, &c. Edinburgh, 1828. One volume, octavo.

THIS work is a valuable contribution to our means of information on the pathology and symptomatology of diseases affecting the central portion of the nervous system. It is executed with manifest care, on a well arranged and well digested plan, and from the predominance of personal dissections and observations, is fairly entitled to the reputation of originality. It confirms and illustrates the reports of the continental pathologists, MM. Lallemand, Martinet, Rostan, Gendrin, Bayle, &c.

It is divided into four parts, each of which is subdivided into sections, and amplified by an appropriate appendix. The first part treats of inflammatory affections of the brain; part the second, of apoplectic affections; part the third, of organic diseases of the brain; and part the fourth, of the diseases of the spinal cord and its membranes.

The first part, or that which describes the inflammatory affections of the encephalon, has the first section applied to their outline or general characters, as marked by the abnormal sensibility of the head, by the motions and perceptibility of the eye, by the state of hearing, of speech, of intelligence, of the circulation, of the locomotive powers, of the secretions, and especially of that of the urine. The author seems to be well aware of their great variety in grade, of the unsettled character of their symptoms, and admits that it is impossible to define them all in one general account.

Having stated facts of sufficient notoriety concerning the several parts of the encephalon, which become seats of disease, as its three membranes and the substance itself; he also sketches out the principal pathological features observable after death, to wit, serous effusion, false membrane, suppuration, ramollissement, (softening,) and some others. In regard to serous effusion or hydrocephalus, he remarks the erroneous opinion which had generally crept into medicine, but is now almost as extensively exploded; of the symptoms being caused exclusively by the compression of the brain, and not by the state of irritation, in which the organ is placed. Ramollissement, he says, consists in a part of the cerebral substance being broken down into a soft pulpy mass, retaining its natural colour, but having lost its cohesion and consistence. It differs entirely from suppuration in having neither the colour nor the smell of pus, and in the pure milky whiteness of the brain being retained. We agree with Dr. A. in regard to the most common seats of it, being the fornix, the septum lucidum, and the corpus callosum, but especially the two first. Long before this mode of disorganization had attracted the notice of pathologists as one of frequent occurrence, we had been struck with its prevalence, especially in dropsical subjects, and had been taught by repeated experience to avoid them when a healthy brain was required for class demonstration.

The question is as yet undecided whether this state of softening is one of the terminations of inflammation; or as Mr. Rostan is more disposed to believe a peculiar and primary affection. Dr. Abercrombie thinks that each opinion is right in its place, and that the adoption of both is sustained by the facts adduced. In the very numerous autopsies of Mr. Rostan and his friends, a majority of the patients were more than sixty years of age, and the softening was chiefly observed in the external parts of the brain. Dr. A.'s patients, on the contrary, were of a more mixed kind in regard to age, were principally young persons and children, suffering from symptoms of acute hydrocephalus, and on dissection exhibited unequivocal inflammation, in the deep redness and suppuration of the cerebral matter surrounding the softened spot, and in the deposition of false membrane upon the nearest superfices. He says that "we may even observe in the different parts of the same diseased mass, one part in the state of ramollissement, another forming an abscess, while a third retains the characters of active inflammation." Dr. A. is, upon the whole, disposed to consider ramollissement as a gangrene of the brain; and that it was produced in the cases of Rostan by a failure in the circulation, but in his own cases by inflammation.

Dr. A. believes that idiopathic inflammation of the dura mater is of very rare occurrence. The only case he has seen, was in a young lady of twenty-two years, and terminated on the fifteenth day. It presented on dissection a purulent focus, of the size of a crown piece, between the os frontis and the dura mater; this spot of the latter was black, ulcerated on both surfaces, but not perforated, and was here and there thickened. The superior semicircumference of the right hemisphere was coated with thick purulent matter, and had beneath the arachnoidea an extensive adventitious membrane. The substance of the hemisphere was sound, excepting a dark livid colour of its surface.

The following is an instructive account of the dissection of a gentleman aged twenty, who died on the tenth day of intense earache; or in other words, an acute inflammation of the temporal bone, attended with cerebral symptoms. There was some effusion under the arachnoid of both hemispheres, and much of it in the ventricles; extensive ramollissement of the parietes of the lateral ventricles. The right temporal bone was carious, dark-coloured, very soft, and when cut discharged pus from its cavities. The adjoining dura mater was thickened and inflamed, and had externally a deposite of thick purulent matter behind the petrous bone. The tentorium was inflamed, and there was almost universal arachnitis of the cerebellum, extending into the fourth ventricle, and manifesting itself by a coating of lymph and thick flocculi of purulent matter.

The following dissection presents us with a strongly evolved arachnitis, (hydrocephalus internus,) of the ventricles. A child aged ten months, had fever, starting, vomiting, white tongue and costiveness for a week, when the symptoms abated, except the vomiting; but the pulse continued frequent. At the end of ten days the pulse became rapid, there was squinting and blindness, and in three days more death ensued after a convulsion. The autopsy exhibited the ventricles distended with six ounces of turbid fluid, with flakes of lymph floating in it. The lining membrane was thickened, easily separated by dissection, and was coated thickly with coagulating lymph. The septum was thickened, and the pineal gland distended with a greenish fluid. The arachnoid on the posterior part of the cerebellum to the extent of a crown piece, was thickened, covered by false membrane, and had pus beneath it.

Dr. A. having detailed several other cases of arachnitis in young adults and in children, some of which were attended with thickening, purulent, and fibrinous secretion, and others with only an effusion of serum, then draws the following inferences:—

1. "That in ordinary cases of hydrocephalus, the coma and other symptoms attending it, are not to be considered as the direct effect of the effusion, but of that morbid condition of the brain of which the effusion is the consequence.

2. "That we have no certain mark which we can rely upon as indicating the presence of effusion in the brain: slowness of the pulse, followed by frequency, squinting, double vision, dilated pupil, paralytic symptoms, and perfect coma, we have seen exist without any effusion.

3. "That all these symptoms may exist in connexion with a state of the brain, which is active, or simply inflammatory, while the disease is the subject of active treatment, and while by such treatment adopted with decision at an early period, we have the prospect of arresting its progress in a considerable proportion of cases. In all of them, the period for active practice is short, the

irremediable mischief being probably done at an early period of the disease." —Page 149.

In the section, (page 150,) treating of the causes of the inflammatory affections of the brain, he makes the usual allegations concerning eruptive fevers; suppressed evacuations, especially the menses; injuries; phthisis pulmonalis, and so on. The following is an interesting narrative of its connexion with ischuria ureteralis. A gentleman aged seventy, became incapable of passing his urine, and on the introduction of a catheter into the bladder, the latter was found empty —he continued in this state with slight uneasiness in his back for six days. On the seventh his thoughts became confused, and his speech indistinct; on the ninth he was comatose; and on the thirteenth he died. On dissection the bladder was found empty; the ureters were completely obstructed by calculi near the kidnies, and the latter were distended with urine. Extensive effusion was found in the ventricles of the brain.

The treatment recommended by Dr. Abercrombie for inflammatory affections of the brain, is blood-letting, general and topical, active purgatives, and cold applications to the head. He is doubtful of the advantages of early blistering, and at any rate prefers it upon the back of the head and neck; when the disease is advanced he considers this remedy very appropriate. He doubts the value of the mercurial practice which is so highly recommended by weighty authority. Active purging with Croton oil he considers a paramount remedy, though bleeding and cold applications are not to be neglected. The most effectual mode of applying the latter he considers to be a stream of cold water directed for a suitable time against the crown of the head; under its operation he has seen a very strong man, reduced in a very few minutes, from the highest state of maniacal excitement and strength, into one approaching asphyxia.

The following case of extensive loss of cerebral substance from tubercular disease, will be found worthy of perusal. A young lady of eighteen years was attacked with paralysis of the left side of the face; the affection disappeared in a few days, but afterwards returned and subsided again. Frequent attacks of intermittent vertigo lasting for a day or two followed and prevailed during a year; in the intervals her health was perfect. At the expiration of this time, she, while at dinner, fell from her chair, completely insensible, but without convulsion, and remained so two hours. These paroxysms of giddiness were repeated, with head-ache, first in intervals of a few months, but they became approximated towards the end of two years: so that for a fortnight she would have them every day, and then there would be a suspension for another fortnight. In this progress amaurosis showed itself. The lady in the intervals of paroxysms was so well, that she underwent the solemnity of marriage two months before her death. The evening before the latter, her general health and spirits were such that she spent it cheerfully with a party in the house of a friend, and returned home about eleven o'clock. She died during that night unknown to any one.

Dissection.—"The brain externally appeared healthy, but when a thin section was cut from the upper part of the left hemisphere, a cavity was exposed through which a probe passed in every direction without any resistance, through nearly the whole extent of the hemisphere. This, upon farther examination, was found to arise from the whole hemisphere being in such a remarkable state of decomposition or softening, that it formed one great cyst full of soft pultaceous matter, inclosed in a very thin covering, formed by the healthy cerebral matter on the surface. The healthy portion forming this covering, in many places did not exceed a quarter of an inch in thickness; and at the thickest parts, which were on the upper surface of the brain, did not exceed one-half or three-fourths of an inch. The contained matter was a thin, soft pulp, mixed with portions of a pellucid, albuminous substance; which coagulated when they were thrown into boiling water. This matter was chiefly in irregular masses, but there were some firmer portions of it which could be separated in the form of distinct round nodules, resembling hydatids. On examination, however, they were found not to be hydatids, but uniform masses of the albuminous matter in a more concrete state. On the external part of the hemisphere, lying over the petrous portion of the temporal bone, there was a tumour the size of a pigeon's egg, adhering firmly to the inner surface of the dura mater. Externally it was irregular, as if formed of a congeries of smaller tumours; internally, it was composed partly of a reddish, soft, flesh-coloured matter, and partly of a semi-pellucid albuminous substance in nodules of various degrees of firmness. When thrown into boiling water, the whole mass assumed a uniform, opaque, white colour, and a hard, cheesy consistence. The left ventricle was entire; it contained a small quantity of serous fluid, and was separated from the diseased mass by a very thin septum. The right hemisphere was healthy, except on the inner part of the anterior lobe, which was considerably softened. It appeared to every one who witnessed the dissection, that the left hemisphere had been considerably enlarged, and the right diminished in the same proportion, the falx being sensibly pushed towards the right side. The optic nerves seemed softer than natural; the cerebellum was healthy."

Dr. Abercrombie, on the subject of apoplexy, has quoted several interesting cases, with and without any obvious morbid lesion, which have come under the observation of himself and of different writers. The inference seems to be fairly established by him, as it has been done by others, that sometimes very considerable serous effusion, amounting to eight or even sixteen ounces, has prevailed without apoplectic symptoms, while on the contrary, in other cases, no appreciable quantity has been found where these symptoms were equally strong. The question here very naturally arises, whether the serous membrane of the brain, has not like that of the thorax, the same ability of executing absorption for some time after apparent death, and whether the disappointment of finding an effused fluid does not frequently come from the exercise of that faculty. It is worthy of being suggested, that so long as the serous membrane retains its integrity of organization, it may be strongly disposed to execute post mortem absorption. It is well known that the celebrated MASCAGNI* asserts his having witnessed its continuance for fifteen, thirty, and even forty-eight hours in the pleura; and from the general identity of structure, we have reason to suppose the arachnoidea capable of a similar faculty.

Dr. A. denies the natural existence of the prevalent distinction between the symptoms of sanguineous and of serous apoplexy. He considers that the flushed face and full pulse, said to be the diagnostic of the former, and the pallid countenance and weak pulse of the latter, are common to both, as dissection proves. General analogy will support this position, and we are disposed to think, that cerebral symptoms, in the present state of our knowledge of them, rather manifest the organ affected than the mode of disease. By way of illustration, suppose, in the case of the lungs, a patient with a respiration highly embarrassed; if our investigation of the disease cannot go beyond this single symptom, it is evident that advanced pulmonary consumption, water in the thorax, a tumour compressing the lung, collapse in the latter, and many other conditions, will present an identical appearance. But the actual difference between the brain and the lungs, is that with the stethoscope, expectoration, percussion, and so on, our means of diagnostic for the latter are immeasurably more varied and perfect; and we can trace not only general symptoms, but analyse them into their shades and varieties, dependent upon specific modes of lesion; whereas many of the latter are in the utmost obscurity in affections of the brain, and must remain so till our methods of inquiry are much more advanced and improved.

We cannot, without extending this article beyond due bounds, go much further in our sketch of Dr. A.'s work. We think it a valuable acquisition to the practitioner and pathologist, and recommend strongly its perusal.

W. E. H.

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* See Horner's General and Special Anatomy, Vol. II. p. 13.

BIBLIOGRAPHICAL NOTICES.

1. *De Carbunculo Polonico, &c. Auctore* Adamus Theophilus Helbich, *Magister Medicinæ et Chirurgiæ Varsaviensis.* Berolini, 8vo. pp. 47, 1827.

Perhaps few pleasures can be enjoyed, which are superior to those experienced by one who is professionally doomed to read and examine a great number of books, when he unexpectedly opens a work of unequivocal merit, after much fatiguing reading, and finds himself as by enchantment relieved from the tiresome droning of dulness, or the more offensive vivacity of conceited ignorance. The dogged perseverance with which he resumes his wonted task, and the rueful visage with which he refers to the number of closely printed pages he must wade through, imperceptibly vanish under the influence of a lucid arrangement and a rich, varied, energetic style; his lounging, listless attitude and lack-lustre eye, is speedily exchanged for a position indicative of enlivened feeling and excited attention; his whole mind becomes gradually so concentred upon his author that he arrives at the conclusion long before his interest is exhausted, and regrets that such pleasures must be so brief as well as so "few and far between." For two such happy hours is the writer of this notice indebted to the author of the above-named treatise, which, not long since, afforded him delight and refreshment, after a long day's toiling through the arid pages of sundry "sad and learned" authors. As a slight mark of gratitude, we now attempt to make our readers acquainted with the subject, upon which he so beautifully and excellently writes.

It is right to premise that Dr. Helbich was a practitioner of medicine and surgery in his native country, Poland, for several years previous to his seeking the highest honours of the profession from the university of Berlin. His dissertation therefore is not the first effort of an inexperienced youth, but the vigorous exertion of a man well taught to observe, and gifted with no ordinary powers of expression. This produces in the mind of the reader a feeling of reliance on the truth of his details, and prepares him to derive more ample gratification from the author's style.

The Polish carbuncle, which was thus denominated by Schmaltz, on account of the frequency of its occurrence in Poland, is the same disease which has been indicated by Chaussier, and other French writers by the name of *pustule maligne ou gangreneuse, bouton malin, puce maligne, &c.* and by the Germans as *brandblatter, schwartzeblatter, &c.* There can be little doubt but that this terrible disease has occasionally existed from the remotest antiquity, and in various countries under similar circumstances, though our author believes it to have been confounded with the gangrenous anthrax of medical writers. Ramazzini relates that it raged in Italy in 1609; Schroek in 1712, and Buchner in 1726, speak of it as existing in Germany and Poland; Chaignebrun describes it at Paris in 1757, and Hartmann observed it the following year in Finland; Berlin describes this disease as having destroyed two hundred negroes at Guadaloupe in 1774. Since that period various writers have treated of this disease, but few of them have enjoyed opportunities of observation equal to Dr. Helbich, whose account is given with that vigorous raciness, so peculiarly distinctive of originality.

As the Polish carbuncle, or gangrenous pustule is communicated to the human race by simple contact from diseased domestic animals, Dr. Helbich properly commences with a sketch of the predisposing causes and form of the disease which affects these creatures. He states that when the spring comes on rapidly and pleasantly, the sudden melting of the ice and snow swells the water-courses, which overflow the whole soil of low regions. As the summer approaches the waters subside, leaving numerous pools, that soon exhale fetid vapours, and afford an unwholesome drink to the cattle, which are all day exposed to an ardent sun. The inundation spreads a filthy slime over vegetation, which is subsequently filled with putrescent insects. Cattle using such food, soon begin to grow unhealthy, prostration of strength ensues, and a disposition to putrid and destructive fevers supervenes.

Three stages may be observed in this disease among domestic animals. The inceptive, the period of increase, and that of termination. In the first the animal loses appetite, becomes languid, weak, somewhat thinner, the eyes lose their lustre, and sometimes have a subinflammatory redness. Cows cease to yield milk. After various intervals chills ensue, which are even more intense when the attack comes on in summer. The sadness and feebleness of the animal increasing, fever begins to rise, the bowels are constipated, and the animal is wrung by a painful tenesmus. Ruminant animals cease to ruminate. The left side becomes tumid, and painful to the touch. Sometimes the attack presents differences according as the appetite for food remains or is exceedingly increased, or scarcely any fever comes on. Occasionally the disease comes on with few obvious symptoms.

The fever persisting in severity, is followed by the greatest prostration of strength, and the increase of the disease is indicated by the tottering of the hinder limbs. Soon after the animal falls down, having the neck very much stretched out, or with the mouth drawn to the left side. The teeth are gnashed. The whole body convulsed, and the internal sufferings extort deep groans. The bowels are totally obstructed. Blood burned to blackness, flows most copiously during the tenesmus, or in consequence of the internal convulsions from the prolapsed rectum. Sometimes I have observed an animal to fall down and expire suddenly, without exhibiting any of the more violent symptoms.

The termination of the disease is twofold; sometimes the worst symptoms are protracted for some days, and the fever diminishes; fetid evacuations, at first copious, become at length natural; rumination returns, and, after a long convalescence, the animal recovers its health. But, more frequently, the disease attains its highest degree. The skin is studded with knots or gangrenous carbuncles; chronic spasms end in universal tetanus; a viscid saliva flows from the gaping mouth, the respiration is only continued by painful convulsive efforts, and after long agonies the poor beast expires.

On dissection, the lungs are found loaded with black blood, spoiled, and sometimes so soft that they break with the least touch. The liver is sometimes natural in appearance, at other times beset with squalid ulcers; the gall-bladder is copiously filled with black bile; the intestinal tube is inflamed and filled at different parts with a colluvies of black and fetid blood. Most frequently, however, the characteristic sign of the disease is found in the spleen, as this viscus is of thrice the natural size, rotten, and as if composed of nothing but clotted blood, showing no evidences of its proper structure, and bursting immediately when dropped on the ground.

Although this fever attacks all domestic animals, it is not contagious, as from whatever cause it may arise it affects one herd without extending to another. It is often observed that healthy calves suck diseased cows without taking the disease; and at times of a herd confined to the same pasture, part will perish of the malady without the other part being at all affected.

During the ten years which Dr. Helbich practised in Poland, he treated two hundred patients labouring under the carbuncle, and never saw a single instance in which there was any reason to believe in the spontaneous origin of the disease in the human subject, but that, 1st. Whenever the putrid fever raged among the cattle, men were affected with the Polish carbuncle. 2d. The disease was most especially frequent wherever the epizootic raged most violently. 3d. Those persons only took the contagion, who were by their occupations obliged to be about cattle, as farmers, herdsmen, butchers, tanners, &c. 4th. The Polish carbuncle only seized upon the naked parts of the body fitted to receive the poison, as the face, arms, and feet; rarely were other parts affected. 5th. Another argument in favour of the communication of the disease from without, is that it first appeared externally, and afterwards the internal symptoms came on.

The disease was communicated by simple contact of the blood of the diseased living animal, or any of the excretions, or by merely touching the skin of the nostrils, as has been proved by many authorities. I shall hereafter relate such an instance which fell under my own observation.

The disease was also communicated by the contact of any part of an animal dead of the putrid fever. As all the solids and fluids of the animal contain the poison, it is not surprising that this mode of communication should be the most frequent. The country people, ignorant of the nature of the disease, killed the sickly cattle, either for the sake of their flesh, or for the purpose of diminishing their loss by the sale of their skins. Under any of these circumstances, naked parts of the human body were brought into immediate contact with the carcass, which poisoned with virulence, whether the integuments were sound or excoriated. Whether one part of the carcass were more poisonous than the other is uncertain, and not easy to be ascertained by experiment. The viscera, as if containing the seeds of the disease, appeared to be more noxious than other parts. A warm carcass infected more readily than a cold one. All parts of the surface of the human body takes the infection with equal readiness; wherever the skin is touched by the poisonous fluids the deleterious principle is absorbed, and the gangrenous inflammation supervenes. The following instance is the one above referred to:—

In the province of Kramsk, about the commencement of June, 1826, some cattle died very suddenly, when no person was known to have the Polish carbuncle, nor had the people observed any remarkable cause for the disease among the cattle. Three young rustics were engaged in stripping the hide from a dead ox, when a very robust and healthy country wench, about thirty years of age, passing by, fell to deriding the young men for skinning the dead animal. Seeing that she had offended them very much, she took to flight, and they chased her, caught and threw her on the ground, and with their bloody hands, as a good joke, smeared her face about the lips, her bosom, and neck.* In three days afterwards, all the parts thus touched were affected with a violent itching, and broke out into carbuncles. From that time, many of the inhabitants of the province were affected by the disease, and an individual perished from neglect of all treatment. When the prefect heard of the dreadful state of the disease he requested me to go thither, and I found fourteen persons suffering from the carbuncle, and one dead, as just mentioned. The unfortunate woman above mentioned was in the agonies of death when I arrived, and died a few hours afterwards, on the eighth day from the application of the matter, and on the fifth from the eruption.

It is very singular that those who are engaged in skinning or cutting up the animals, which are uniformly killed by the Polish peasantry, as soon as they perceive them to be affected with the fever, are more liable to be attacked by the carbuncle than those who eat of the flesh. Dr. Helbich has seen as many as two hundred boors eat of such flesh, boiled and roasted, without the slightest injury, while the skinners invariably fell under the disease. A couple of rascally butchers, at the beginning of one of these epizootics, brought by stealth a diseased bullock into the town of Konin, which they slaughtered at night and exposed the next morning in the market for sale. Many of the inhabitants, and Dr. Helbich himself, purchased and ate of this beef, without the least injury, and the cheat might never have been discovered had not both the rogues in a few days afterwards been rewarded for their exploit by an attack of the dreaded carbuncle. Nevertheless it is by no means to be understood that disease may not be communicated by such food, which should be most carefully avoided.

Dr. Helbich does not believe that the disease is communicable from one human body to another, without actual contact of the diseased part.

The disease begins in the following manner: a few days after the communication of the infection, a slight colourless swelling, like a flea bite, is perceived, which is unaccompanied by increased heat. In a short time, and generally at the same moment, a pustule appears in the centre of the little prominence, never exceeding the size of a millet seed, and when examined by the microscope is seen to be filled with a viscid fluid. This pustule is productive of dreadful itching, and an irresistible propensity to scratch. When the epidermis is removed the pustule gradually increases, and is filled with an ichorous fluid, which at length becomes black. When the pustule is accidentally broken or opened with an instrument, a few drops of bloody humour escape, and the bottom of the little ulcer appears of a livid black, somewhat higher towards the edges, depressed in the centre, concave and scooped out like an umbilicus and secreting an ichor from all its surface. This gangrenous affection of the skin having advanced to the cellular texture, is at this time about the size of half a hazlenut. The disease soon after becomes more extensive, inflammation ensues in the neighbouring parts, gangrenous phlyctenæ form in the vicinity of the tumours, violent burning pains are felt, the skin becomes puffy and elastic; all the evidences of vast irritation show themselves; fever, nausea, vomiting, and all the signs of the participation of the stomach and bowels ensue, and after a struggle varying in duration, the unfortunate patient expires.

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* "Imo unus temeraria manu pudenda contrectat."

We regret that it is not in our power to follow our author throughout his account, as we cannot otherwise do him the justice we wish. Such an extension would be incompatible with the design of these notices, and we must hasten to a conclusion.

The disease is always to be arrested in the first stage, as it is entirely local. Excision with the knife or destruction by caustic potash are uniformly successful when properly employed. Dr. Helbich, for reasons which will present themselves to every reflecting mind, gives a general preference to the caustic, and he has been very successful in treating the disease. The other treatment consists principally of the administration of such materials as are suited to keep up the strength of the patient, and diminish excessive irritation. The inflammatory stage is so short as scarcely to allow of antiphlogistic measures. All local emollient applications are positively injurious and increase the gangrenous disposition. The dressings must be stimulating, and the country people frequently sprinkle the ulcers with salt, powder of cantharides, and other acrid and stimulating substances with advantage.

With this cursory view of the subject of Dr. Helbich's treatise, we must terminate our notice. We have already mentioned that he writes like an experienced physician, and a highly refined scholar: he never makes use of any of the barbarisms so commonly resorted to by those who would conceal their ignorance of the Latin language, nor does he employ one of the horrible inversions of phrase, which are frequently passed off by sciolists as evidence of their profound acquaintance with Latin construction. We unfortunately possess some works, that nothing but "dire necessity" could compel any one to read, which from such causes are almost as bad as if written in hieroglyphics: fortunately a black oblivion awaits all such, while the works of men of true genius and refined education, shall be handed down to posterity in perennial youth, and be read with pleasure and advantage through the remotest ages.

To American physicians it may prove a very useful subject of research, to ascertain if possible, whether in various parts of our country diseases may not be communicated in a similar manner; and our city and town physicians may probably derive advantage from inquiring whether our markets may not *occasionally* be supplied with meat about as healthy as that sold in the markets of Konin. At least such investigations might bring to light a number of important facts, and might lead to a discovery of causes for various affections, which no one, *a priori*, would imagine. In the western country we know that the human kind is liable to a form of disease, from eating the flesh and drinking the milk of sick animals, and there is reason to believe that even the gangrenous carbuncle has occasionally appeared in some parts of the Union. At the present day, when subjects of inquiry appear to be rather more scarce than inquirers, we hope that these well-meant hints will not be without their use. J. D. G.

2. *A Practical Essay on Stricture of the Rectum; Illustrated by Cases, showing the Connexion of that Disease, with Affections of the Urinary Organs and the Uterus, with Piles and various Constitutional Complaints.* By FREDERICK SALMON, Surgeon to the General Dispensary, Aldersgate street, and formerly House-surgeon to St. Bartholomew's Hospital. London, 1828, pp. 188, 8vo.

The object of this work is to prove that stricture of the rectum is a very common disease, inducing many other important affections; and that surgery furnishes us with means adequate to its removal or alleviation, provided such means are exercised with judgment and science.

Mr. Salmon commences with a brief account of the anatomy and physiology of the rectum. He considers it as composed of three portions, or curvatures: the first commences at the termination of the sigmoid flexure of the colon, and includes nearly half the length of the intestine, its concavity being forwards; the second portion is about three inches and a half in length, and extends to the prostate gland in the male, and under the vagina in the female, and has its concavity upwards; the third comprises the remaining portion of the intestine, and has its concavity slightly inclined backwards. The seat of stricture, according to our author, is most commonly about five or six inches from the anus, at the angle formed at the junction of the upper and middle curvatures, and consequently beyond the reach of the finger; its next most frequent seat is at the junction of the sigmoid flexure with the rectum.

Mr. S. agrees with Mr. White, that there is frequently a constitutional predisposition to stricture, resulting, he believes, from the narrowness of the colon at the sigmoid flexure. Another, and a common case of stricture, he is of opinion, will be found in the administration of large doses of drastic purgatives; indigestion also is a cause, but he denies that it is ever consequent on syphilis. The other causes of stricture are, an enlarged and tender condition of the uterus, carcinoma, enlargement of the prostate gland, and piles—tumours or excrescences growing in the bowels, fistula in ano, &c.

Mr. S. says, that in the commencement, strictures are for the most part simply spasmodic, but that in process of time, from continued irritation, depositions take place between the coats of the bowel, and that ultimately the bowel becomes indurated and thickened; in some instances bands of a firm consistence extend from side to side, forming septa across the bowel.

We pass over the chapter on the symptoms of stricture, as they at most can only lead to a suspicion of its existence, and rouse the practitioner to ascertain its existence by examination.

The treatment of this affection is divided by Mr. S. into the constitutional and surgical. The first comprises topical applications to the neighbouring parts, as leeches to the verge of the anus, cupping the perineum, nates, or loins—attention to diet, keeping the bowels regular by mild laxatives, and especially by injections. The most important part of the treatment, however, is the surgical, or the use of the bougie. Mr. S. gives the following directions for the introduction of this instrument, the rectum being evacuated and tranquillized by the administration, an hour or two previously, of an injection of tepid poppy water with forty or fifty drops of laudanum.

"A full-sized bougie, not less than eleven inches in length, thoroughly softened and well oiled, adapted to the shape of the passage through which it is to be passed, is to be introduced with the convexity of the first curve towards the sacrum, in which way it is to be passed upwards and backwards about two inches, through the third portion of the bowel, provided it gives no pain, for the introduction will commonly produce an uneasy sensation; we continue to propel the bougie in the same direction, about three or three and a half inches higher, or through the second portion of the rectum; the point of the instrument will now bear directly upon the hollow of the sacrum, and the but-end towards the left side of the body. With a view, therefore, of avoiding the sacrum, and of accommodating the instrument to the great curve of the rectum, we change its position, by describing the segment of a circle from left to right, with the but-end, turning it upwards, at the same time continuing to propel the instrument. Having described this segment, we shall have carried the bougie full four inches farther, or to what may be considered the extent of the rectum. But it is yet to be introduced into the sigmoid flexure; we therefore triflingly depress the but of the instrument, at the same time propelling it upwards, till the whole is fairly within the sphincter—this accomplished, we may be satisfied.

"Upon encountering obstruction, trifling pressure is to be maintained for a minute or two, and if under this careful pressure the pain increase, and the instrument remain stationary, it is to be withdrawn, the next size introduced, and so on from above downwards, till we ascertain the size which passes with trifling pain or difficulty fairly into the sigmoid flexure. Should we doubt whether the bougie has entered this part, the doubt will be removed by relinquishing the pressure from the end of the instrument, when, if the bougie has not entered the sigmoid flexure, it will slowly recoil; we are occasionally apprised of its having entered this part by the passage of air from the bowel."

Mr. S. allows the bougie to remain in the bowel ten or fifteen minutes, provided it produces no considerable irritation; care being taken to affix a tape through the loop to prevent the instrument being drawn up into the rectum. He repeats the operation at intervals of from three to five days, increasing the size of the bougie, and the period it is suffered to remain in the intestine, according as the circumstances of the case permit. Mr. S. differs from others in the frequency of introducing the bougie; he formerly passed it as recommended by authors, but believing when used daily, and suffered to remain in the bowel eight or ten hours at a time, that the irritation which it caused did not subside during the interval, and that the disease was often aggravated, he determined to introduce it less frequently, and he found that his patients not only experienced less irritation, but that he was enabled to increase the size of the bougie more rapidly.

The instrument used by Mr. S. is composed of fine linen cloth, very heavily coated with wax and a certain portion of diachylon plaster mixed with a small quantity of lamp-black. From immersion in very hot water some minutes previously to being used, it is rendered soft and pliable to any extent, and retains one regular and smooth surface. When introduced into the bowel, it hardens to a degree sufficient to afford considerable resistance to the action of the stricture. The largest size Mr. S. uses is three inches and a half in circumference, the smallest one inch; the medium between the two he subdivides into ten sizes; the length of the instrument is eleven inches. When there is extreme local irritation, benefit will result from smearing the instrument with an unction composed of one ounce of elder flower ointment with a scruple of very finely powdered opium. Mr. S. places no confidence in medicated bougies.

The introduction of the bougie is sometimes followed by severe cramps, sometimes by shivering, occasionally an inclination to sickness; very commonly when it is passed into the sigmoid flexure, and during the time it remains in the part, pains extending over the whole surface of the abdomen, more particularly in the epigastric region. These latter are sometimes so considerable as to alarm patients; they generally however subside; if they do not, a cordial aperient draught will remove them. Great annoyance is often experienced in the introduction of the instrument, from the powerful action and irritation of the sphincter muscle; this Mr. S. says may be considerably lessened by passing the bougie completely through both the external and internal sphincters, first affixing a tape through its loop, a precaution which should never be neglected, for the bowel will sometimes draw up the instrument completely out of the reach of the finger.

The division of the stricture he considers a dangerous, and in many cases, an equally useless operation; never admissible except where the obstruction is within reach of the finger, and even under the most favourable circumstances sometimes productive of a fatal result. He has performed the operation but twice, and in one the patient fell a sacrifice to peritoneal inflammation.

Mr. S. devotes a short chapter to carcinomatous diseases of the rectum, and concludes his work with remarks on the various affections which he considers as necessary consequences if not the immediate symptoms of stricture. These diseases are certain affections of the urinary organs, of the uterus and vagina, distention and permanent enlargement of the colon, piles, and determination of blood to the head; and a number of cases, some of which are extremely interesting, are given, illustrating these affections.

The work is founded principally on the results of personal experience, and is a useful addition to our medical literature.

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3. *Uebersicht der Wichtigsten Heilquellen im Königreich Preussen, mit Besonderer Beziehung auf ihre Benutzung im Sommer* 1826. Von Dr. E. Osann, Professor der Medicin zu Berlin. Berlin, 1827, 8vo. pp. 70.

A Survey of the principal Medicinal Springs of Prussia, with particular reference to their Use, made in the summer of 1826. By Dr. E. Osann, Professor of Medicine at Berlin.

In this small but valuable volume, Dr. Osann has rendered an excellent service to the professional men of his country, and set an example worthy of general imitation. During the summer of 1826, he visited the most remarkable medicinal springs of Prussia, and made particular observations on their qualities and uses, thus filling up a vacuum which has always hitherto existed in the medical history of his native land, and augmenting the resources of practitioners, by placing within their view a satisfactory account of her abundant mineral springs. In saying this, we do not imply that nothing had been published in relation to Prussian mineral waters, previously, but that no special treatise embracing a view of the whole had been presented; of necessity the practitioner could derive little benefit from the scattered and individual tracts, published at various times, and in different places, in relation to a few of the most remarkable.

The same defect has long existed here, and has been deeply felt by American physicians. Bounteously as the author of nature has opened these sources of health throughout our land, and numerous as the tracts and analyses are, which have been published concerning some of our most celebrated springs, the practitioner still has to wish in vain for an ample book of reference, in order to judge of their comparative merits, or to decide upon their especial adaptness to cases under his charge. Great as this deficiency is, we had rather it should continue to be felt, than that a mere compiler should undertake to supply the remedy. It is a subject worthy of better treatment, and we believe that a competent observer who should visit, analyse, and carefully inquire into the remedial efficacy of all our most remarkable mineral waters, and present the results of his investigations in a *small, well arranged, and lucidly written* treatise, like that of Dr. Osann, would not only be well rewarded for his trouble, but acquire a lasting title to the regard of the medical profession.

Dr. Osann gives an account of more than sixty situations in Silesia, Glatz, Niederherrhein, Westphalia, Brandenburg, Sachsen, Pomerania, and East Prussia, with the number of patients treated at each place, and leads us to infer that great benefit is annually conferred on the community by the use of these waters, of all these springs, those which are richest in sulphur, and have the additional advantage of being used, at the same time, as natural warm baths, appear to have relieved the greatest number of patients; especially such as laboured under rheumatism, cutaneous affections, irregular menstruation, glandular swellings, &c.

We cannot attempt, in the present notice, to present the ample analysis which would be necessary to do justice to Dr. Osann's survey; but as it forms a valuable contribution to the general history of mineral waters, it will always be referred to as satisfactory authority, and it is doubtless received by his countrymen, who are especially interested, as a work entitled to much attention.

We indulge the hope that the mineral waters of North America will before long receive that notice, from some competent observer, to which their value and importance so justly entitle them; and if the work be performed in the manner we have heretofore mentioned, the author of such a treatise may feel satisfied of receiving a very ample reward. J. D. G.

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4. *An Introduction to the Comparative Anatomy of Animals, compiled with constant reference to Physiology, and elucidated by twenty copperplates.* By C. G. Carus, Med. et Phil. Doct. Professor of Midwifery to the Medico-Chirurgical Academy at Dresden, &c. &c. Translated from the German, by R. T. Gore, Member of the Royal College of Surgeons in London. London, 1827. 2 vols. 8vo. pp. 771, and 1 vol. 4to. of plates.

Comparative anatomy has been too generally restricted to a mere description of the structure of animals, without reference to the mutual relations of similar or dissimilar organizations, or the relation existing between these differences, and the corresponding differences in the phenomena of life. Taking man as the ideal type of the most perfect structure, it has been usual to commence with the most complex animals, and to trace organization in a descending series, thus adopting the most difficult mode for the student, presenting him with but an obscure view of the subject, and impressing his mind often with erroneous ideas of the importance or character of particular parts. Restricted within such narrow limits, and studied in the manner we have indicated, comparative anatomy can throw little or no light on its more important sister science, physiology, or indeed be considered of much importance in the general circle of science. Comparative anatomy, however, comprises a much more extensive field, and when properly cultivated will yield rich contributions, not only to physiology, but also to pathology and medicine. A comparison of the various forms of living beings, the observation of what is identical, consequently essential in all the manifestations of life, and the consideration of those phenomena, which under certain circumstances undergo modifications, and may therefore be supposed less indispensable, must evidently be the surest and easiest method of arriving at a knowledge of life and at an acquaintance with its laws.

Entertaining these views of the science, Professor Carus commences with a description of the organs as they first appear in their simplest form in the lower classes, and traces them in their gradual and successive development, to their most complex forms in the higher orders of animals, keeping constantly in view the functions of animals and the modifications which entire apparatus of organs undergo in the different classes. He has thus furnished us with a most interesting and instructive work, presenting a comprehensive view of the actual state of the science, and one which forms a highly useful introduction to physiology, and should be carefully studied by all those who wish to arrive at a complete knowledge of that science.

5. *American Medical Biography; or Memoirs of Eminent Physicians who have flourished in America. To which is prefixed a Succinct History of Medical Science in the United States from the first settlement of the Country.* By James Thatcher, M. D., Fellow of the American Academy of Arts and Sciences; Honorary Member of the New York Historical Society, and of the New York Horticultural Society, &c.; Author of the American New Dispensatory, of the Modern Practice of Physic, and of the Military Journal. Two vols. in one, 8vo. pp. 716. Boston. Richardson & Lord, and Cottons and Barnard, 1828.

Dr. Thatcher has laid the profession at large under great obligations for the various works which he has contributed to their libraries. The present one is the completion of a task promised to us for some time; and although, from our previous acquaintance with the merits of the author, we were led to anticipate great pleasure and instruction from his labours, we have been nowise disappointed. On the contrary, the American Medical Biography presents a higher degree of interest than could at first be expected, considering that the lives of physicians, to whatever eminence they may have attained, are seldom distinguished by remarkable adventures or variety of incident. But from the first settlement of our country, the medical profession has exercised a most active influence in the promotion of science and the diffusion of knowledge, for which its votaries are especially fitted by their free intercourse with society, and that independence of feeling and opinion, which results from a close intimacy with nature, and the influence of moral and physical agents. Hence we find physicians occupying very prominent stations in the early annals of our country, and among the most active patriots both in the cabinet and field. That our author was himself early engaged in the great cause of freedom, whilst it renders his productions more interesting to others, must contribute in no small degree to the solace of his advanced age.

In composing the volumes under consideration, there appears to have been no lack of materials; they indeed were so abundant as to call for considerable suppression and retrenchment, in order that the book should not become too unwieldly or expensive. The assemblage of medical and political characters brought into one view by Dr. Thatcher, would, as he justly observes, reflect honour upon any country, and must be useful both to the present and rising generations, by affording the most correct models of all the virtues and excellencies which adorn the man or exalt the physician.

That portion of the work which is devoted to the history of medicine in America, has been arranged so as to afford a sketch of the medical character in each state, and present a view of its most distinguished physicians. It will be read with interest, and in common with the rest of the work is written with great impartiality.

The work is embellished and enriched with portraits of some of the most distinguished individuals. G. E.

6. *Observations on the Causes and Early Symptoms of defects in the form of the Spine, Chest, and Shoulders, and on the means of correcting them: with Remarks on the different Methods pursued in this Country and on the Continent in the Treatment of Distortions, being an enlarged edition of the Papers lately published in the London Medical Journal.* By John Shaw, Surgeon to the Middlesex Hospital, and formerly Lecturer on Anatomy. London, 1827, pp. 130, 8vo. with nine plates and numerous wood-cuts.

The alarming increase of spinal disease is strongly indicated. In 1823, M. Milli established the first institution in Paris for the cure of distorted spine, since which time a very great many others have been erected. In some as much as six thousand francs are paid per annum for the boarding and medical treatment; a sum called for, it is said, by the complex, *ponderous,* and expensive machinery employed in the treatment of this obstinate malady. But a few years have elapsed since even the nephew of Sir Astley Cooper was confided for the cure of such a case to a country quack, to whom resorted almost all the cases in England, and they were hardly too numerous for his continued solitary exertion. Now the alarm has become general, and the remarkable frequency of the disease has called to its aid the first ability of the medical profession. Book after book in rapid succession, announces the various remedies suggested by educated ingenuity: and we are, amidst the too great multiplication of suggestions, nearly as much at a loss, as when we heard only of the issue and the inclined plane. A careful survey of all the most popular remedies leads to a classification of them under the following heads:—

1st. Tonics administered internally.

2dly. External tonics, such as the cold bath, exercise, frictions, &c. without supports for the spine.

3dly. Cathartics steadily and durably administered.

4thly. Rest either on a horizontal or inclined plane without extension.

5thly. Rest on similar planes, with extension, and pressure to mould the shape.

6thly. Exercise with continued props.

7thly. Exercise with occasional but daily repeated extension. The weight being thrown in some cases on the hips, in others on the ground.

The present volume of Mr. Shaw is occupied with able strictures on the comparative advantages and disadvantages of each of these suggestions. Bringing to the consideration of the subject great anatomical and surgical skill, and a considerable experience, he may be esteemed a highly competent judge, the more especially as he has taken the trouble to visit the most celebrated spine establishments of the continent. In 1823, he published a volume "On the Nature and Treatment of the Distortions," &c.; in 1825, one called "Further Observations," &c.; and in the present volume has collected and enlarged a number of papers printed in medical periodicals. We consider the last as his best work, both because it is less diffuse and more explicit than its predecessors, and is in fact a good digest of the contents of the former volumes, which were defective in method and perspicuity.

The result of his investigation is an unqualified condemnation of all treatment by confinement and rest, and a commendation of that which invigorates, while it affords occasional extension. After exertion, rest should, he thinks, be taken on an inclined plane; and even on such a plane many muscles may be made to exert themselves beneficially for the patient.

"As so many objects may be attained by this contrivance, and especially as it admits of the combination of exercises, rest, and support, I believe that it alone would be sufficient to the cure of a distorted spine, and that the patient would continue in good health, even were she not to quit it for months. But I have never put a patient to such a trial. I permit her to sit up four hours at least out of fourteen. Of these four hours two should be spent in the open air. When the patient sets up or walks, the spine should be prevented from sinking. This is most conveniently done by the side supports fastened to a girdle round the hips. If it should be necessary to keep the cervical part extended, this can be accomplished by a small rod passing up from the girdle, or sometimes by a stiff-necked collar, similar to that worn by soldiers."—pp. 105, 106.

It is singular that Mr. Shaw, after laying down the soundest principles of practice, should have returned after condemning the inclined plane, to such a continued use of it. No wonder then that he should in this volume speak so much less confidently of his success, for he has been carried away from his principles by authority. When he recommended exercise, and only absolutely necessary props, he did well for the cause in which he was so diligently engaged; but when he suggested the confinement to that plan which he himself had denounced, and that too without precautionary purging, he might have looked for that disappointment which befell him. We who have seen the good effects of entirely extrinsic supports, while the patient is taking exercise, cannot help lamenting that Mr. Shaw should recommend supports which rest on the hips, and which compress the abdomen and chest, and the muscles of the back. We did expect to find him a hearty approver of the crutches used in Paris, because they do not confine the patient; nor do they interfere in the least with the action of muscles or the duty of ligaments; and he himself admitted the cheerful and agile movements of patients so treated. We have unquestionable evidence of their usefulness, and believe that the spine cart, spine swing, crutches, and cathartics, and the cold bath, are adequate to the entire removal of any very recent case of lateral or serpentine curvature, not caused by rickets or pulmonary irritation. J. K. M.

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7. *Malaria; an Essay on the Production and Propagation of this Poison, and on the Nature and Localities of the Places by which it is produced, with an enumeration of the Diseases caused by it, and of the means of preventing or diminishing them, both at Home and in the Naval and Military Service.* By John Macculloch, M. D., F. R. S. &c. &c. London, 1827, pp. 480, 8vo.

That a poisonous aeriform substance, uncognisable except by its effects on the human system, is generated by wet lands and marshes, is a fact which has been familiar to physicians from the earliest ages; it is recognised and treated of at some length by Hippocrates, and has been the subject of observation and inquiry down to the present time. But a knowledge of this fact is not confined to medical men alone; it is familiar to the most unenlightened people; the inhabitants of the fens of Lincolnshire, of the maremma of Italy, or of the morasses of Ceylon, are equally aware that the great waste of life among them is mainly attributable to this destructive and widely pervading agent. This substance has received the names of marsh miasmata, malaria, &c. and appears to exert a deleterious influence co-extensive with the inhabited portions of our globe, giving rise to a great proportion of those diseases which assume a periodical type.

If any theory in the science of medicine is based on undeniable facts, and substantiated by weight of evidence, it is that of the effects of malaria; yet opponents to this doctrine have not been wanting, who have endeavoured to convince themselves and the world, that such an idea is wholly erroneous and hypothetical, and that malaria exists but in idea. That the arguments by which these writers have striven to maintain so dangerous a doctrine are ingenious, and their reasoning plausible, we are ready to admit; but experience, the surest test of truth, is wholly against them, and the superstructure they have raised, however fair in appearance, and skilfully put together, must fall to the ground, for like the tower in the parable, it is but based on sand.

No doctrine is calculated to do greater mischief than that of the innoxiousness of marsh miasmata, and fortunately for the world it is one which has gained but few adherents.

A complete refutation of this wild and erroneous speculation, will be found in Dr. Macculloch's work, which presents, in a small compass, all that is valuable and interesting from former writers on the subject, together with a mass of original observations, evincing much talent and research, and placing the subject on such a vantage ground as will, we trust, render any additional evidence unnecessary.

We shall not attempt to give an analysis of Dr. Macculloch's work, as we are convinced that it would give but an imperfect view of the subject; the learned author has presented his facts and observations in so condensed a form, and so connected with each other, that a careful perusal of the whole treatise is requisite to a full understanding of the doctrine. We, however, think it may be interesting to our readers, to present them with a short sketch of some ideas that appear to be original with Dr. Macculloch, and which, if found by closer observation and more extended experience to be correct, will tend to obviate one great source of the objections which have been raised against the existence of malaria.

It is generally acknowledged and proved, that marshes or swamps, whether fresh or salt, are generative of malaria, but it is also a common opinion that it requires a certain extent of this soil, and generally a considerable one, to produce disease; this says Dr. Macculloch, "is an error, and must be classed among the dangerous ones, as being productive of a false security. *A priori*, if a large tract of land in this particular condition produces a given quantity of malaria, it is certain that this mass must be an union of all the portions generated by its parts; and if, as is the fact, however vaguely stated, this poison is the chemical produce of vegetables, living or dead, acting on water, or acted on by it, then must every plant and fragment of a plant, contribute its share of the deleterious substance." Dr. M. also thinks that there is an analogy between malaria and the matter of contagion; and as in the latter case, the quantity of deleterious matter sufficient to produce disease is imponderable, and not to be detected by any chemical test, so analogous effects may be produced by the minutest portions of malaria. That this is the fact, is a matter of observation and experience, as many instances are recorded where a very short exposure to malaria was sufficient to excite fever, and still more to re-excite it, in those who are labouring under that morbid sensibility derived from former or habitual fevers.

"A marsh, therefore, as far as its essence consists in producing malaria, is not to be defined by space, or it does not demand extent; and I must now show that it is not to be defined by its aspect, as that is commonly understood." Dr. Macculloch goes at some length into an examination of the soils and situations less suspected of malaria, but it would lead us far beyond our limits should we attempt to follow him; it is however, one of the most important chapters in the work, and will amply repay a close and attentive perusal.

There is, however, one point we wish to notice, as it is of great practical importance; that is, the popular idea that there can be no danger, where there is a running stream or renovation of the water; all the danger apprehended is invariably from stagnant, absolutely stagnant and putrescent water; and it is generally considered that smell is the criterion of the hazard, or in other words, that the poison and the smell are identical. "Thus," says our author, "a water covered with duckweed, or crowded with potomogetons, nymphæas, and other floating and absolutely aquatic plants, is the exclusive object of terror; while no fear or suspicion is ever entertained respecting a limpid and apparently pure water, whether at rest in a green lawn, or gliding quietly along its grassy and poachy margin." Dr. Macculloch is upheld in his opinion of the deleterious effects produced from such sources, by Montfalcon, who lays great stress on the evils produced by "pieces d'eau d'agement," and "lacs artificiels."

As regards canals, the subject becomes highly interesting at the present time, when every section of our state is about to be intersected by these channels of commerce; as they partake of the nature of a sluggish river, and indeed in many places of a stagnant pool, they should naturally be esteemed a probable source of malaria; the more so, as from many of our canals having but one high bank, the water flows over the low land in their vicinity, their margins possess all the essential qualities of a marsh, added to which a diminution of their waters exposes mud impregnated with vegetable matter to the action of the sun.

When we recur to facts in absolute evidence respecting the noxious consequences of canals, they are found to be exceedingly numerous and well authenticated. As regards this country, we have not as yet certain intelligence of the existence of the appropriate endemics in the vicinity of canals, though we are strongly of opinion that this proceeds from a want of sufficient observation. It is, however, a notorious fact, that there has been a great waste of human life, and very general sickness among the labourers engaged in the construction of them in this state; what will be their effect, when finished, time will show.

The chapter on the propagation of malaria is highly important, and displays much acuteness of observation; it is however too long to attempt to notice in this place: we shall therefore conclude what we have to say, with a few words on the geography of malaria, particularly as it respects this country.

Dr. Macculloch, after giving a very extensive and interesting sketch of the malaria districts in Europe, observes, "I might detail the geography of the malaria of America at considerably more length, since the information is here more perfect," (than that of Asia.) "Generally, therefore, I must observe, this plague occupies the Canadas in summer every where along the shores of the great lakes and rivers, the character being commonly that of inveterate intermittents: while, whether Lake Erie is worse than the others or not, it has the worst reputation, as have elsewhere the banks of the Mohawk and the Genessee. With respect to the United States, formed of alluvial land as they chiefly are, Volney remarks, that out of a space of three hundred leagues, he did not find twenty houses free from the fevers of malaria; the most distinguished places, nevertheless, being the course of the Ohio, rendering even the interior state of Kentucky insalubrious; the towns of Norfolk, Charleston, New York, Philadelphia, New Orleans, &c. &c. and almost the entire states, in fact, of Virginia, the Carolinas, Georgia, the Floridas, and Louisiana."

Such is Dr. Macculloch's view of the extent of malaria in this country, and unfortunately it presents but too true a picture of the wide and extensive influence of this poison. This state has, for the last few years, been terribly afflicted with intermittents, beginning along the water courses, and gradually pervading the whole country, till at last no situation appeared to be exempt from their attacks; even those situations formerly considered as perfectly healthy, and as possessing no sources of the poison. It appears that under the peculiar state of the atmosphere, that every pond and marshy spot, from which no part of our state is free, poured out miasmata, and affected most of the inhabitants in their vicinity; the large towns, however, were exempted, although in their immediate neighbourhood, from the number of brick-ponds and other sources of miasm, disease was extremely rife.

The yellow fever, which at different periods has been so great a scourge to our maritime cities, is owing to miasm produced under a high degree of temperature and under peculiar circumstances. That this is denied by many, we are well aware, but the fact is now well established; and examples are furnished in every country in which high ranges of the thermometer occur; in fact, the observations and inquiries of those physicians who have had the best means of judging, will fully warrant the conclusion that what is termed yellow fever is the production of marsh miasmata, or, as it was called by Dr. Miller, of New York, koino-miasma, and that our great reliance for protection against its appearance, must be a sedulous and strict attention to the removal or destruction of all sources likely to produce miasma: more will be accomplished by such a plan of procedure, than by the most rigidly enforced quarantine laws that look to contagion as the only mode by which the fever can originate.

The last subject on which our author treats, is that of the diseases produced by malaria. In this we are not, in the present state of our knowledge, prepared to follow to the full extent; his observation, however, that a residence of successive generations in a malaria district produces a degeneracy of the races, is most amply proved. No one that has ever traversed the malaria district in Italy but must have been struck with the appearance of the inhabitants; this is more particularly observable in the Pontine marshes, the chosen throne of malaria; here the residents have the appearance of walking spectres; a great slenderness and emaciation of the limbs, with an enlargement of the abdomen, is a usual characteristic of all who have resided for any length of time in this spot: they are also often œdematous all over, and thus drag on a miserable existence through the short term of their wretched lives.

Dr. Macculloch seems to think that the cretinage of the Vallais, and elsewhere, may be owing to this cause; this is a point on which, however, he does not speak decidedly, and properly observes that it is an object deserving further inquiry.

The list of specific and definite diseases which he considers to be the produce of malaria, is fearfully extensive. Beginning with fevers of all grades and diversities of character, he next attributes dysentery, cholera, and diarrhœa to the same cause, with a multitude of consequent organic derangements. But what he seems to consider as original with him, is the addition to the list of the neuralgic affections, particularly tic doloureux, but as we before observed, the present state of knowledge of the causes of diseases is not sufficiently precise and extended for us to decide whether his views be correct; it is a subject fraught with interest and worthy the attention of every medical man, and will prevent a great mass of evil and suffering, and essentially diminish the sum of human misery.

We most strongly recommend Dr. Macculloch's treatise to the attention of our medical brethren, as presenting a most valuable mass of information on a most important subject. That it is free from errors and gratuitous assertions, can scarcely be expected; but the chaff bears but a small proportion to the wheat. One great defect of the book is the language, which is often ambiguous, and displays an attempt at fine sentences, in which the meaning of the writer becomes so involved, as, in many instances, to be almost unintelligible.

R. E. G.

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8. *Surgical Observations on the Treatment of Chronic Inflammation in Various Structures; particularly as Exemplified in the Diseases of the Joints.* By John Scott, Surgeon to the Ophthalmic Infirmary, and Assistant Surgeon to the London Hospital. London, 1828, pp. 291, 8vo.

Mr. Scott of Bromly, is said to have enjoyed an extensive reputation for his successful treatment of diseases of the joints. The work, the title of which stands at the head of this article, is by his son, and its object is to communicate the mode of treatment so successfully employed by his father.

Mr. S. has prefixed to the essay, a short inquiry into the nature and treatment of chronic inflammation. The two essential conditions of this disease he considers to be venous congestion, and increased arterial action. Chronic ulceration of the lower extremities he says is only the termination and effect of the chronic inflammation by which it is surrounded, and in the treatment, the direct object is not to heal the ulcer, but to cure the chronic inflammation; for if this be effected the ulcer heals spontaneously. The essential remedy for this state of things is, according to our author, mechanical support, he, however, differs from Mr. Baynton, both in his mode of applying this support, and in his explanation of its modus operandi. It acts, he believes, by affording an uniform support to the limb, so as to prevent the veins from yielding to the pressure of their contents, and bringing about a uniform state of the circulation, or in other words, relieving the venous congestion, upon which, as we have already said, he believes the inflammation and ulceration to depend. To effect this, the pressure must of course be applied in a manner very different from that in which it is recommended by Mr. Baynton, indeed, Mr. S. says that he has often found that mode highly injurious. Mr. S. employs the emplastrum plumbi spread on calico, as it does not irritate the skin. "It is most conveniently made use of," he says, "when cut into slips of fifteen inches in length by two in breadth. The foot being placed at a right angle to the leg, one of the slips should be applied from the first bone of the great toe along the inner edge of the foot, around the posterior part of the os calcis to the first bone of the little toe; the middle of another slip should then be placed under the bottom of the os calcis, and its ends extended perpendicularly up on each side of the leg; the third is to be applied along the foot, parallel to the first, and overlapping the half of it; the fourth should be placed parallel to the second, overlapping the half of it, and extending perpendicularly up the sides of the leg. In this manner they should be applied alternately along the foot, and up the leg, the one holding and as it were antagonizing the other in the motions of the foot, until the whole limb is covered from the toes to the knee. Subsequently to this, a calico bandage is applied in the usual manner, first alternately around the foot and ancle, and then up the leg as high as the knee. It is necessary to be particularly careful that the plasters and bandage be applied in such a manner that their superior and inferior edges are accurately placed in apposition to the skin, otherwise they will exert an unequal pressure, which is highly injurious. The whole should be applied with only that degree of tightness which is perfectly agreeable to the feelings of the patient, and not with a view of compressing the parts into a smaller space. In this manner every vessel in the limb will be uniformly and effectually supported.

"In respect to the time at which it will be necessary to renew the applications, that must be regulated by the quantity of the discharge, for when applied in the manner that has been described, they will remain for weeks, or even for months, without altering their position in the least.

"By adopting this mode of treatment, an ulcer on the lower extremity is placed precisely under the same circumstances in respect to the circulation, as one that has its seat on the trunk, or on the upper extremity; and will heal with equal facility."

Mr. S. has also found mechanical support as useful in the treatment of chronic inflammation of the upper as the lower extremities.

In some instances, however, the power of the arteries is so greatly reduced by long continued disease, that mechanical support is not capable of enabling them to resume their healthy action; or they may have become so habituated to the performance of morbid action, that they have no disposition to return to a healthy state, even when their turgescence has been mechanically removed; in other instances the situation of the disease or the texture of part precludes this mode of treatment. In such cases he recommends mercury. This remedy, he says, is now universally acknowledged, has the power of subduing inflammation, and that when the whole vascular system is placed under its influence, inflammatory action subsides. Sometimes, however, although the internal exhibition of mercury is productive of temporary relief, it so greatly impairs the already debilitated powers of the constitution, as to be succeeded by an aggravation of the disease. Fortunately we may get all the benefit, Mr. S. says, without any injurious effect, as when locally applied, it has the same power, according to our author, as when internally administered, and this without producing its constitutional effect.

Mr. S. next enters upon the consideration of the diseases of the joints and their treatment. We pass over his account of white swelling, (which he describes, as it attacks the synovial membranes, the articular cartilages, and the cancellous structure of the bones, and also, as it appears in the knee and hip-joint, as it contains nothing novel,) and proceed to the treatment. This he divides into constitutional and local. The former consists in the employment of active purgatives, or alteratives and aperients, according to the active or chronic state of the disease; tonics, alkalies, diet, rest, or exercise on crutches, according to the state of the disease; warm baths, dress, residence in the country or at the sea side; and full directions are given for the management of all these means.

The next and most important portion of the work is devoted to the description of the local treatment which has been so successful in the hands of his father and himself. The first condition is the absolute rest of the joint, which must be continued some time after exercise has ceased to be painful. If the joint is in a state of more or less active inflammation, this must be subdued by topical depletion, by cups or leeches, the latter is to be preferred when the knee-joint is the seat of the disease.

Mr. Scott's experience leads him to believe, "that the probable effect of blood-letting will be better indicated by the state of the constitution, than by the activity of the local disease. In patients much emaciated, local bleeding has rather aggravated than reduced the disease; yet, subsequently, in these very patients, when their constitutional power had been improved by proper treatment, local bleeding has been distinctly serviceable. When a sufficient quantity of blood has been removed, the best application that can be immediately employed is the common bread and water poultice."

He has never found that benefit result from the use of cold applications which others have described; and he very pointedly objects to the use of blisters, the tartar emetic plaster, setons, issues, and the moxa. "The above-mentioned irritating, and sometimes very mischievous remedies, may," he says, "all be superseded by the following treatment. In the first place, the surface of the joint, suppose the knee, is to be carefully cleansed by a sponge, soft brown soap and warm water, and then thoroughly dried; next, this surface is to be rubbed by a sponge soaked in camphorated spirit of wine, and this is continued a minute or two, until it begins to feel warm, smarts somewhat, and looks red. It is now covered with a soft cerate made with equal parts of the ceratum saponis and the unguentum hydrargyri fortius cum camphorâ. This is thickly spread on large square pieces of lint, and applied entirely around the joint, extending for at least six inches above and below the point at which the condyles of the femur are opposed to the head of the tibia; over this, to the same extent, the limb is to be uniformly supported by strips of calico, spread with the emplastrum plumbi of the London Pharmacopœia. These strips are about one inch and a half broad, and vary in length; some are fifteen inches, others a foot, others half these two lengths, and the shorter or longer are selected according to the size of the part round which they are to be applied. This is the only difficult part of the process. This adhesive bandage ought to be so applied as to preclude the motion of the joint, prevent the feeble coats of the blood-vessels from being distended by the gravitation of their contents in the erect posture, and thereby promote their contraction. Over this adhesive bandage, thus applied, comes an additional covering of emplastrum saponis, spread on thick leather, and cut into four broad pieces, one for the front, the other for the back, the two others for the sides of the joint. Lastly, the whole is secured by means of a calico bandage, which is put on very gently, and rather for the purpose of securing the plaster, and giving greater thickness and security to the whole, than for the purpose of compressing the joint. This is an important point, as otherwise an application which almost invariably affords security and ease, may occasion pain, with all its attendant mischief.

"In some cases, in which the skin is thick and indolent, sufficient irritation will scarcely be excited by the above applications, and this may be promoted by rubbing on a small quantity of tartar emetic ointment previously to the application of the cerate. This, however, is rarely necessary.

"In some cases, also, it is desirable more effectually to prevent the motion of the limb, particularly in children. This may be done by applying on each side of the joint; externally to the plasters, a piece of pasteboard, softened by soaking in water, and cut into the length, breadth, and form of splints. These being soft, will accommodate themselves to the figure of the joint, and, when dry, effectually preclude all motion."

"The remedies thus applied will not require very frequent removal. The time during which they may be left undisturbed, will depend chiefly on the necessity for a repetition of the bleeding, in which we must be guided by the degree of pain, or, when there are open abscesses, by the quantity of the discharge. Should neither of these influence the question, the only necessity for removing the dressings will arise from their having ceased to keep up any irritation in the skin. In some cases it will be necessary to re-apply them every week; in the generality of instances they may be allowed to remain a fortnight, and in others for a longer time. Even where there are open wounds, I allow them to remain several days or a week, being fully convinced by experience that the presence of the matter does less harm than the frequent disturbance of the part. A strumous ulcer can scarcely be disturbed too seldom; nothing does so much harm as officious dressing and probing."

"The remedies I have just detailed may be employed for any length of time, and over any extent of surface that may be necessary, without irritating the constitution or producing salivation. They also admit of being varied and modified in as great a degree as the disease varies or is modified by them; they are consequently adapted to disease commencing in any of the structures of which a joint is composed, as well as to the various stages in which it may be found."

A number of cases are appended to the work, to illustrate this plan of treatment and its efficacy.

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9. *Manual of the Physiology of Man, or a concise description of the Phenomena of his Organization.* By Ph. Hutin. Translated from the French, with notes by Joseph Togno, Student of Medicine.

One of the distinguishing characteristics of the present age are the facilities given to the acquirement of knowledge. Science is taught in horn-books. Learning is adapted to the capacity of every intellect, and condensed into a bulk that may be seized on by the most occupied, and acquired by the most listless. If no road has yet been struck out to conduct a royal idler to the temple of knowledge without exertion, at least something in the nature of literary velocipedes has been discovered, that push us along with ease and rapidity over the tract that of old was traversed with toiling exertion. What with conversations, catechisms, dialogues, manuals, and philosophy in sports and in toys, ignorance will not have a nook to shelter in. Knowledge is becoming universal. It is scattered over the tables of our parlours, and the toilettes of our females; it may be listened to in our kitchens, and infants who formerly were mewling and puking in the nurse's arms, now lisp philosophy.

Our own science is not without these aids to learning made easy. Heretofore they have consisted in dull, unconnected questions and answers, intended merely for the use of dunces to assist them in passing an examination. They are of English manufacture, and are on a level with the state of medical science in that country. We are indebted to the younger, highly intelligent and active members of the profession in Paris, for a far superior order of works of this kind under the title of "Manuals." They are composed for the use of students, who resort from all quarters of the world to that great seat of medical instruction. Each manual contains a summary of the branch on which it treats, and they are all, as far as we have seen of them, some ten or twelve in number, written with admirable talent. They are the best text books for the student, and present in a compendious view the present state of the science. They may be consulted advantageously by all who wish to acquire the most recent information, and obtain a knowledge of the progress of the medical sciences.

One of these "Manuals," whose title is prefixed to this article, has been translated by Mr. Joseph Togno, a student of medicine in the University of Pennsylvania. M. Hutin, in composing his manual, has taken the large work of Adelon, the best treatise extant on physiology, as his guide, though he has not followed the order of arrangement of that work.

In an introductory chapter we are presented with a general consideration of natural bodies, exhibiting the differences between inorganic and organic bodies, between animals and vegetables, and the principal distinctive circumstances of animals in general.

The functions, "the means of existence," are divided into two classes. The first embraces those that sustain the life of the individual; the second, those which serve to preserve the species, to which is an appendix embracing ages, individual differences, sympathies, and death. This classification of the functions which approaches a natural arrangement, is adopted with some modifications from Richerand.

In giving a translation of this little work, Mr. Togno has rendered an important service to the American student, and it may truly be said to the profession at large, for correct physiological knowledge cannot be too widely diffused. It is the basis of all sound doctrines and safe practice in medicine.

The translation, from a hurried perusal, appears to us to be faithfully executed, and renders the exact meaning of the author. A few unimportant errors, chiefly typographical exist, that a second edition, which we do not doubt will be called for, will give an opportunity to correct.

A translation of the same work has been done in London, but executed in a most slovenly manner. It is filled with errors, evidently arising from a superficial acquaintance with the French language. For instance in page 293, digéré, (digested,) has been mistaken for dirigé, and been translated "directed towards," which makes nonsense of the passage. At page 148, we meet with a translation the very reverse of the original, and a mistake so gross we doubt that the translator is a physiologist. In the original, speaking of the great sympathetic, it is observed, "il existe chez tous les anencephales, il sert donc immédiatement à la vie végétative." This is rendered, "we meet with it in every animal *provided with a brain*, it actually then is in a direct manner subservient to *negative* life." There are many other mistakes manifesting an equal deficiency both in the language of the original, and the science the subject of the work.

Some notes have been added by the translator that are judicious and appropriate. In a note to the paragraph treating of the vesiculæ seminales, page 222, the translator mentions he had discovered in the human subject while dissecting, the last spring, a muscular coat to these organs, as well as a sphincter to their ducts and vas deferens. Cuvier had noticed a structure of this kind in the elephant, but Mr. Togno is the first who has observed it in the human species.

10. *Essai sur les Maladies de l'Oreille Interne.* Par J. A. Saissy, D. M. &c. Ouvrage Couronné par la Société de Médecine de Bordeaux, et considerablement augmenté par l'auteur. Paris, 1827, pp. 284, 8vo. with a plate.

Of the diseases to which mankind are subject, none are involved in greater obscurity than those of the organ of hearing. This may be in part ascribed to the complicated structure of the auditory apparatus, and to its situation, which is such as by no means to facilitate the researches of ordinary inquirers, but is especially owing to the apathy induced by the belief that the nature of its derangements are so obscure that all inquiry is fruitless and unnecessary. It would be foreign to our purpose, on the present occasion, to enter into a particular refutation of this opinion. That there are difficulties to be encountered in the investigation must be conceded, but they are far from being insurmountable.

As the subject is one of great importance, we hail with pleasure every attempt, however feeble, to throw light upon it. The essay of Dr. Saissy, is not intended as a complete treatise on deafness; it presents, however, a very interesting sketch of the pathology and treatment of that affection, and if not enriched with many novel views, at least has the merit of presenting a lucid sketch of what is at present known; and contains a description of an instrument he has devised, by means of which fluids may be injected into the Eustachian tube. The work is divided into six sections. In the first, the author treats of the diseases of the membrana tympani; in the second, of those of the cavity of the tympanum, of the bones found there, and of the mastoid cells; in the third, of the affections of the interior of the Eustachian tube; in the fourth, of those which attack the parts in the neighbourhood of that tube; in the fifth, those of the labyrinth; and in the sixth, those of the auditory nerves.

We shall not notice this work more particularly at present, as we intend hereafter to give an elaborate review of the principal works on the subject, so as to present a monograph or condensed view of the actual state of knowledge in relation to the diseases of the ear; we shall on that occasion recur to the subject of the present notice.

QUARTERLY PERISCOPE.

FOREIGN INTELLIGENCE.

ANATOMY.

1. *Woman who had three Mammæ.*—Dr. Robert, of Marseilles, communicated to the Academy of Sciences an account of a woman who, in addition to two mammæ placed in their natural situation, had a third situated in the left groin. This inguinal mammæ served to suckle several children, one of whom was not weaned until thirty-three months old. The mother of the woman had three mammæ, but all upon the chest.—*Bulletin des Sciences Medicales.*

2. *Absence of the External Organs of Generation and Anus.*—A case is related in the *Journal de Médicine*, of a girl, æt. fourteen, well formed, who had not the slightest appearance of external organs of generation or anus, the skin being continued over the parts where these organs are usually situated. The girl had a good appetite, slept well, and enjoyed excellent health. At the end of every three days she suffered considerable pain around the umbilicus, after which she vomited fæcal matter from the mouth. The urine passed away by the nipples.

3. *Open Foramen Ovale.*—Dr. Crampton believes that an open foraman ovale is a more frequent occurrence than is supposed. He relates two cases in which he has observed this formation: one in a boy of eighteen years of age, and the other in a man of thirty-four. In the former, "the septum between the auricles exhibited an oval depression, or attenuated space of about one-third of an inch in diameter, guarded only by a thin membrane; but at one side it was evidently pervious and open, with a rounded and thickened edge. This membrane acted like a curtain or valve; when viewed or pressed from the left auricle it was closed, the curtain or membrane pressing close, and overlapping the opening; viewed from the right auricular cavity, or touched with a probe, it opened, and allowed a free passage, fully as large as a goose's quill, compressed so as to exhibit an elongated or oval section. The blow-pipe exhibited the same difference of a closed or open space, as it was used from the left or right side of the auricular septum." In the latter also, the valve overlapped and protected the aperture so that no blood was likely to pass, unless the contracting power of one side of the heart prevailed over the other. As in the former case, the curtain was more readily pushed aside, from the right to the left. Dr. Townsend relates a similar malformation in a man aged thirty-four, who died in the Whilworth Hospital.—*Transactions of the King and Queen's College of Physicians in Ireland, Vol. V.*

4. *Malformation of the Genital Organs.*—"An individual, ætat. twenty, was lately admitted into one of the female wards of Guy's Hospital, who exhibits the following peculiarities. This person has never menstruated, but at the usual periods feels symptoms of constitutional derangement, indicating the natural efforts

to perform that function. The clitoris is about the size of the penis of a boy ætat. twelve or thirteen. Where the urethra is situated in the male there is a portion of skin, as if nature had attempted to form an urethra. The opening to the bladder is at the bottom of this, and in the usual situation of the female urethra. In each labium is a small body like a testis, with a very indistinct epididymus, and a cord, together with a vessel like the vas deferens. The vagina is about an inch and a half in depth, and terminates in a cul de sac. In passing the finger up the rectum, no body like a prostate can be felt, nor any tumour like an uterus distended with retained menstrual fluid. The countenance is feminine; there is no development of the mammæ, the breast being perfectly flat; the nipple and little areola round it as small as in the male. There is more muscularity shown in the legs; and they have more hair than in the female. The same was observed with regard to the arms. The shoulders are broader also. The pelvis and knees more of the masculine character. The larynx too exhibits the appearance of the male. She states, however, unequivocally, that her passions are decidedly for intercourse with the male.

"This young person has been farther examined by an eminent accoucheur since the above was transmitted to us, and we subjoin an account of his observations.

"The individual either has no uterus, or in place of it a mere vestige of womb, not bigger than the first joint of her little finger. The upper part of the vaginal canal is wanting, though it is not improbable that a compact cordy structure supplies its place—a point which, if it be deemed necessary, may be easily ascertained by farther investigation. The bodies in the labia feel decidedly much more like testicles than ovaries. That ovaries exist in the pelvis is almost certain, because there are female desires, and efforts at vicarious menstruation. The perinæum is masculine; the feel of the abdomen partakes little of the feminine character; across the hips she measures twelve inches, and across the shoulders fifteen inches and one-eighth, a somewhat masculine proportion. Both the clitoris and testicles may, I conceive, be safely taken away."—*London Medical Gazette, Vol. I. No. 7.*

5. *Absence of Pericardium.*—In the fifth volume of our preceding series we noticed a case of this kind, recorded by M. Breschet, another similar one is reported in Rust's Magazin, vol. xxiii, 1826. The heart floated freely, and without a pericardium in the left thoracic cavity.

PHYSIOLOGY.

6. *Organization and Functions of the Spleen.*—M. Strauz has made some microscopical observations upon the texture of the spleen of an elephant. He could not detect any appearances which are common to the fibrous or vascular tissue. Some of the filaments in the substance of the viscus were about half a line in diameter, and were open; but instead of finding a canal within them, as he had before imagined was the case, he observed that they contained a pulpy matter, similar to that which is seen in nerves. He hence concluded that the spleen was a plexus dependent upon the ganglionic system of nerves. M. J. Arthaud agrees in the accuracy of M. Strauz's remarks; and, from experiments he has himself made, he draws the following inferences:—

1st. In the vertebrated animals the existence of the spleen is always connected with that of the nervous system.

2d. The spleen is not apparent until the second month of pregnancy; at which period the ganglionic system of nerves becomes evident.

3d. It presents similar alterations to those which are made upon the nervous system, by variation of age; by the degradation of the inferior animals, and by various preternatural formations.

4th. In true acephalous cases, the disappearance of the spleen is a constant occurrence.

5th. Those substances which especially stimulate the nervous system, act very powerfully upon the spleen, which is always tumefied by their influence.

6th. The tissue of the spleen preserves in pure water the density which it had acquired by previous immersion in a mixture of seven parts of water, and one of nitric acid; while the vessels which enter into the composition of the organ are softened and become putrid.

7th. Numerous facts lead to the conclusion that an alteration takes place in the spleen, in that class of intermittent fevers which the ablest practitioners have deemed to be nervous affections.

8th. M. A. imagines that he can show, by experiment, and by facts, from comparative anatomy, that the spleen is nothing more than an electric apparatus, by the agency of which the blood undergoes a particular modification. He promises shortly to enter more fully into this perplexing subject, and also to offer some original observations upon the functions of the nervous system.—*Journ. des Progrès, Vol. VI.* 1827.

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7. *Hæmorrhage from the Bladder vicarious of the Menses.*—M. Lisfranc reported to the Royal Academy of Medicine, the case of a woman whose vagina was completely closed by adhesions, and who on two occasions had at the menstrual period discharged blood from the bladder.

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8. *Vicarious Hæmorrhage from the Lungs.*—A female, æt. sixteen, was attacked towards the latter end of the year 1826, with a severe cold, fever, and a slight spitting of blood. This catarrh lasted two months, but had entirely ceased when, at the period when the menses should have appeared, she expectorated in abundance a frothy bright-coloured blood, almost pure. The menses did not appear, and the spitting of blood continued during the whole time they ought to have flowed. After this she got well, and on the following month the menses appeared regularly, but at the next period they were again suppressed, and as on the first occasion, there was a continued hæmoptysis. The month after the catamenia flowed, but have not again appeared for four months, during which time the hæmoptysis has come on regularly every day at nearly the same hour, in the same quantity, and of the same kind. The blood is apparently arterial, and is scarcely mixed with mucus. The patient is under treatment at the Hospital La Charitié.—*London Medical Gazette, Vol. I. No.* 6.

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9. *On the Evolution of Heat during the Coagulation of the Blood.*—Dr. Davy has shown, that the opinion of Dr. Scudamore, that when the blood coagulates, heat is evolved, is incorrect; at least that the experiments upon which that opinion is founded, are entirely inconclusive. It would seem from Dr. Davy's experiments, as well as from those of Mr. Hunter, that if any heat is evolved during the coagulation of the blood, it is too inconsiderable to be detected.—*Edinburgh Medical and Surgical Journal, April,* 1828.

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10. *On the Carbonic Acid in the Blood.*—Sir Everard Home and Dr. Scudamore have attempted to prove that blood, both arterial and venous, contains a notable quantity of carbonic acid gas, uncombined and free, a portion of which always separates when blood spontaneously coagulates, and the whole of which is disengaged when atmospheric pressure is removed by means of the air-pump. Dr. Davy, in a note published in the Philosophical Transactions for 1823, asserted that the blood gives off no carbonic acid gas under the circumstances specified, and that it contains none, and in addition to the reasons that he there stated for his opinion, he has published the following additional one in the *Edinburgh Medical and Surgical Journal,* for April, 1828. He added carbonic acid gas to blood and to serum, over mercury, at the rate of one-fourth cubic inch of gas to the ounce, the whole of which was absorbed, and yet the blood and serum still ex-

hibited free alkali, indicated by the change produced on litmus and turmeric paper; and he raised the temperature of the blood and serum to blood-heat, and no carbonic acid gas was disengaged; and he has coagulated both by heat of about 200° Fahr. and even then not a particle of gas was extricated. If then, blood and serum have the power of retaining at the temperature of 200°, and in the act of coagulation, carbonic acid gas added at the rate of one-fourth cubic inch to the ounce, and if this portion of carbonic acid is not sufficient to neutralize the free alkali of the blood, it is hardly probable that blood can possess any free carbonic acid gas.

11. *On the Irritability of the Sensitive Plant.*—" M. **Dutrochet** has collected into a single volume the long and important researches which he has made upon the moving powers which act in organised bodies. His experiments on the sensitive plant occupy an essential part of this work. A new procedure, which he has employed in vegetable anatomy, has led him to results which would tend to invalidate a celebrated theory. He asserts, that all the elementary organs of plants, that is to say, the cellules and tubes of which their body is composed, have an independent existence, and form circumscribed organs; so that these organs would only have to each other relations of vicinage, and would not form, by their assemblage, a really continuous tissue. He affirms, that there are neither pores nor fissures visible to the microscope in the cellular tissue, any more than in the fibres of vegetables. There are only seen on the walls of these organs small semi-transparent globular bodies, and linear bodies, which become opaque from the action of acids, and are rendered transparent by that of alkalies. M. Dutrochet considers these small bodies as the elements of a diffused nervous system. To the analogies of intimate structure and chemical nature, which he brings forward to support this opinion, the author adds physiological considerations, taken from experiments, which are peculiar to himself; and which, in his opinion, prove that the motions of vegetables are spontaneous: in other words, that they depend upon an internal principle, which immediately receives the influence of external agents. Refusing to admit *sensibility* in vegetables, M. Dutrochet substitutes for this term that of *nervimotility*.

" With regard to the organ of motion in the leaves of the sensitive plant, M. Dutrochet has proved, by decisive experiments, that it consists in a bulging of the parenchyma, or of the *cortical medulla*, which is situated at the base of the petiole, and at the base of each of the leaflets of which the leaf is composed. He has discovered that this organ, to which he has given the name of *bourrelet*, is composed of globular cellules, disposed in longitudinal series, and filled with a coagulable fluid. It is not by means of joints that the sensitive plant, any more than the other irritable vegetables, moves its mobile parts; but by means of a curvature impressed on these parts in the place where the organ of motion occurs. Thus, in the sensitive plant, it is the bourrelets alone that, by curving, produce the folding of the leaves. M. Dutrochet has found that this curvature is the result of a vital elastic power, which even manifests itself in the thin slices that are taken from these bourrelets. He has given the name of *incurvation* to this phenomenon. Thus the vegetable irritability consists only in an elastic incurvation, which is sometimes fixed and sometimes oscillatory. For example, this elastic incurvation is fixed in the tendrils of vegetables, in the valves of the ovarium of the balsamine, &c.; it is oscillatory in the vegetables that are named *irritable*—vegetables which present in their mobile parts a state of alternating incurvation and straightening.

" It has long been known that the sensitive plant presents a phenomenon of sympathetic transmission. If one of the leaflets of this plant be slightly burnt with a burning-glass, all the leaflets belonging to the same stalk will fold themselves one after another. This motion deserves to be carefully examined; and in order to determine the part of the stalk by which the transmission in question is operated, M. Dutrochet made several very delicate experiments, from which there results that it is neither produced by the pith nor the bark, but that it takes place exclusively by means of the woody part of the central system. Inquiring afterwards what, in this woody part, are the special organs of the transmission in question, he arrives at the conclusion of its being effected through the medium of the sap contained in the tubes which he names *corpusculiferous.* He has found that the maximum of velocity of this motion of transmission is fifteen millimetres per second in the petioles of the leaves, and only three millimetres per second in the body of the stalk. The state of the temperature does not appear to have any influence upon its velocity.

"Light exercises a very remarkable influence upon the irritability of the sensitive plant, the observation of which equally belongs to M. Dutrochet. If a sensitive plant be placed in complete darkness, by covering it with an opaque vessel, it will entirely lose its irritability, and that in a variable time, according to a certain state of depression or elevation of the surrounding temperature. Thus, at a temperature of from twenty to twenty-five degrees of Reaumur, it requires only four days of darkness to destroy completely the irritability of a sensitive plant; while fifteen days of darkness are required to produce the same effect when the surrounding temperature is within the limits of ten and fifteen degrees; so that, on only taking the degrees of temperature in which the sensitive plant can live, it may be established that the extinction of the irritability of that plant in darkness is operated in a period, the duration of which is in the inverse ratio of the elevation of the temperature.

"M. Dutrochet has observed that the sensitive plant deprived of its irritability by means of darkness, recovers it by exposure to light; and that this restoring of the conditions of irritability is more rapidly effected by exposing the plant to the direct light of the sun, than by exposing it merely to the light of day, such as it exists in the shade. From these observations, M. Dutrochet considers light as the external agent from the influence of which vegetables draw the renewal of the conditions of their irritability, or, more generally, of their *motility;* conditions which are subject to deperdition in the natural state, and which thus require to be continually repaired."—*Edinburgh New Philosophical Journal.*

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12. *Case of a Female, who attained her seventeenth year, without giving indications of sensation or motion from Birth.*—Davies Gilbert, Esq. President of the Royal Society, relates in the April number of the *Edinburgh Medical and Surgical Journal,* a most extraordinary case of a female who was somewhat prematurely born, appeared at birth to be very feeble; gave no indications of the usual instinct which guides infants to their natural food, and who was taught with great difficulty to take the breast. One eye was smaller than the other. "Except this excessive weakness in the muscular motions, and total deficiency of the ordinary sensations and appetites, nothing particular was remarked for several weeks after birth, when convulsive fits took place, and increased in violence and frequency of recurrence till they exceeded one hundred in twenty-four hours. Every method that could be suggested by various medical attendants to counteract these fits of convulsions was tried without success. She nevertheless continued to grow in length much like other children. But the defects in motion and sensation increased and became more apparent. Though she originally gave indications of sight, blindness came on; and cataract was observed in the eye originally of the natural size. The sense of hearing, if it existed at all, was very obtuse. Latterly it was impossible to doubt that she was quite deaf. Though she got a first set of teeth, these were not succeeded by others, so that they were temporary only. The sense of taste seemed to be tolerably perfect, as fruit, confections, custards, and other sweet articles were received with indications of pleasure.

"She never acquired any thing like the power of voluntary motion; and she attained her seventeenth year without ever having held up the head, raised her hand to her mouth, or set her foot to the ground. She never was heard to utter any thing like an articulate sound; and a feeble cry or whine only was believed to indicate want of food. When this was gratified, especially with sweet articles, the countenance exhibited an expression of satisfaction.

"The bowels were habitually very slow, so as to require the perpetual employment of medicine; and to this no temporary exception was ever remarked. She never acquired any command over the sphincters.

"For some short time previous to death the weakness seemed to increase; and exactly on the day when she completed her seventeenth year, she expired in a manner so gradual, that the attendants thought her asleep, when she was really dead.

"I understand that some indications of the menstrual discharge had been observed; and the usual marks of puberty were not wanting. I am not aware, however, that the mammæ had enlarged.

"Her length must have been equal to that of many persons of her age. The spine and limbs were distorted; and the person was much emaciated."

After death the body was inspected by James Coles, Esq. who gives the following account of the dissection.

"On opening the cranium, the first thing which presented itself to observation was the very great distention of the vessels of the brain and of its membranes. The first longitudinal sinus was particularly gorged, and marked its course by a raised dark blue line extending across the dura mater from before backwards. We laid it open, and found it filled with coagulated blood.

"On proceeding with the dissection, we found some little water in the lateral ventricles; but this is often poured out after death in the healthy subject; and as the contents of the ventricles were perfect, more particularly the optic thalami, I should be inclined to consider that as a natural appearance.

"On removing the brain from the basis of the scull, so as to expose the nerves, we could trace each pair taking their usual course to their destination; and they all appeared firm and healthy, as in the most intelligent individual. But in the base of the scull itself, not a vestige of the dura mater was to be seen. Its place was supplied by a thin semitransparent membrane, very lax and irregular, so that it afforded no protection to the nerves in their exit from the scull.

"On the back part likewise, the whole, or the greater part of the *tentorium* was deficient, thus allowing the whole weight of the brain to rest on the cerebellum.

"We proceeded carefully to trace the nerves to their separate organs, and found them in every respect seemingly perfect. Indeed the optic nerves appeared particularly developed, as also the ophthalmic branches, although cataract existed in both eyes to a very considerable degree. Nothing further appeared worthy of observation. From these circumstances, I should be inclined to say, (as far as human research can explain the mysteries of our nature,) the causes of the child's deficiency were as follow.

"That from the want of the *dura mater* on the base of the scull, and its place being only imperfectly supplied by the thin expansion before mentioned, the mass of brain was allowed to press on the nerves of sense as they passed through their separate foramina, and thus their vital principle became destroyed; and that the cerebellum, not having any protection, in consequence of the want of tentorium, was also pressed upon by the cerebrum, which likewise suffered in its turn, thus probably accounting for the total extinction of intellect."

Sir Anthony Carlisle published many years ago, in the first volume, page 212, of the Transactions of the Society for the Promotion of Medical and Surgical Knowledge, the history of a woman, apparently twenty, who died of fever in the Westminster Hospital. In the brain of this woman, the falx was entirely wanting from the *crista galli* to the *tentorium*, the opening in which also was much larger than usual; and consequently not only did the one hemisphere press the other, but part of the brain gravitated on the cerebellum. Yet in this woman the intellectual powers were said to be perfect, and she had no particular complaint of her head.

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13. *Cutaneous Absorption.*—"The subject of cutaneous absorption, and of absorption generally, has been lately investigated by M. Collard de Martigny. He has succeeded in establishing completely the reality of absorption through the skin, and has thrown considerable doubts over the doctrine advanced a few years ago by Magendie and Fodera, and now so generally adopted, that substances are absorbed throughout the animal system by a process of simple mechanical imbibition. As his experiments on these two topics appear to us important and conclusive, we shall give a short account of them. It is well known that Seguin, Magendie, and other anterior physiologists have maintained, that the skin when not deprived of its cuticle, is incapable of absorbing any substances which do not irritate the cuticle, or alter it in one way or another. This, however, does not appear to be the general opinion; yet we are not aware that any very conclusive arguments have hitherto been brought forward to prove the existence of simple absorption through the cuticle. The vagueness of the foundation on which the general opinion rested led M. de Martigny to endeavour to establish it upon more solid facts; and he has made a great variety of experiments, which seem to put its accuracy beyond all question.

"He first placed upon the palm of the hand an inverted glass funnel filled with water, and remarked an obvious diminution of the water in the tube of the funnel after an hour or even less. He then varied this experiment, using precautions to preserve the pressure of the hand on the funnel uniform, as well as to prevent the evaporation of the water, and he still observed a sensible diminution. The following very simple experiment gave equally pointed results: In two small vessels of the same form and size he placed equal quantities of water, one being placed at his side exposed on the surface to the air, while into the other he put his two hands for half an hour. He then removed them and dried them in a handkerchief, the weight of which was taken both before and after this operation. The water of the two vessels was likewise weighed, and the proper correction being made for what was removed by the handkerchief from the hands, he found that one hundred and seventy-eight grains had been lost by absorption. Similar experiments were made with milk and with beef-tea, and the results were analogous. It appeared to him that the beef-tea was absorbed more rapidly, and milk more slowly than water. On subsequently resuming the investigation he employed a still simpler method. He placed a few drops merely of the fluid to be examined on the inside of the arm, covering them with a small watch-glass, and allowing the experiment to go on for eight or twelve hours and upwards. In this way he remarked that water and brandy were absorbed altogether, and wine, beef-tea, and milk almost entirely. On next extending his researches to oleaginous substances, he arrived at the singular conclusion, that cutaneous absorption is not exercised upon them at all.

Our readers will perhaps remember that Bichat, Magendie, Legallois, and others, have found that oleaginous fluids, directly introduced into the blood, obstruct its passage through the capillaries, and excite inflammation there. They likewise appear to undergo a species of digestion before they enter the lacteals, when they are swallowed as food; and further, when placed in contact with the serous membranes, they are absorbed very slowly, and not till they undergo a species of saponification. In a state of purity, therefore, they cannot enter the blood without causing serious injury. In the alimentary canal this is prevented by their digestion; in the serous cavities by their saponification through means of the serum. On the skin, where there is neither gastric juice nor a serous fluid, it is prevented by their being incapable of passing the cuticle. M. de Martigny found that they did not lose an atom of weight, after being eleven hours in contact with it.

"The author concludes this department of his subject by endeavouring to determine the circumstances which regulate absorption through the skin. He has discovered that it is most rapid on those parts of the body where exhalation is greatest. He has farther remarked, that while exhalation is going on, there is no absorption; that absorption is diminished during exercise or by an increase of temperature; and that it is increased by a depression of temperature or by the evacuation of blood. In short, cutaneous absorption is influenced by every particular in the inverse ratio of cutaneous exhalation.

"The other question which the author has endeavoured to investigate relates to the mechanism by which absorption is effected. The experimental inquiries of Magendie and Fodera are conceived by many physiologists to be conclusive of the fact, that absorption is carried on by a process of simple imbibition; in other words, that in reaching the absorbent vessels substances percolate the living exactly as they do the dead tissues. It has always appeared to us, however, that the experiments of Magendie were liable to important objections, and that even the more conclusive experiments of Fodera, while they prove that mechanical imbibition or filtration does sometimes occur in the living body as through dead membranes, do by no means also prove that this phenomena is not materially under the influence of the vital principle. The experimental reasoning of these two physiologists has been very ably criticised by M. de Martigny, and its fallacies exposed. To the experiment of Magendie, which consists in insulating a vein and applying an active poison to its surface, he very properly objects that the poison may have entered the blood not by filtration but through the *vasa vasorum.* He admits, however, the conclusiveness of the experiment of Fodera, in which he found that substances injected into the peritonæum might be soon afterwards discovered in the chest; but he insists that the existence of such an imbibition is no argument against the existence also of a special action of absorption; and such a special action, has, we think, been proved by him to occur in the following phenomena. Into the stomach of animals killed the previous day, he injected a weak solution of hydrocyanate of potass, and four minutes afterwards he observed that the outer surface of the stomach became of a uniform blue colour when tested with the sulphate of iron. He then repeated the same experiment on living animals with the following results. Twenty minutes after the injection of the hydrocyanate, when none of it had reached the outer surface of the stomach, he poured several drops of the sulphate of iron over it. It was not till five minutes afterwards that he remarked here and there a faint blue tint not uniformly diffused as in the former instance, but arranged in a fine network; gradually the tint deepened and extended itself, its reticulated structure became less distinct, and at length a uniform blue stain was formed, as in the dead animal. It is not easy to see to what the slow progress of the fluid through the living stomach is to be attributed, unless to the permeability of the tissues being modified by their vitality. He has also endeavoured to establish the doctrine of special absorption by the following experiment, in which an attempt is made to show that absorption is under the influence of the nervous principle. Having divided all the nerves which supply the hind leg of the rabbit, he tightened a ligature round the whole thigh, exclusive of the vein and artery, and introduced a solution of the extract of nux vomica into the lower part of the leg. He then found that the poison operated more slowly than when the nerves were left entire. In conclusion, therefore, from these and other familiar facts, the author argues that the new doctrine of absorption must be modified by a partial return to the old; and he adopts the opinion, that this function is carried on by a special and elective action of the capillaries."—*Ed. Med. and Surg. Journ. April*, 1828.

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14. *Nature and Composition of the Sweat and Insensible Perspiration.*—"This subject formed the prize question of the Heidelberg Medical Faculty in 1821; and the following are the principal results obtained by the experiments of the successful candidate, Dr. Anselmino. The insensible perspiration was collected by confining the arm for some hours in a long glass jar, the mouth being secured

to the arm by fine oil-cloth, and the whole kept cool by a stream of cold water. By this method about a table-spoonful was procured in five or six hours. It was neither acid nor alkaline. It gave a copious precipitate with lime-water; emitted ammonia when it was evaporated to dryness, with a little sulphuric acid, and then decomposed with potass; and gave out a strong acetic odour when it was digested with litharge, evaporated to dryness, and then treated with dilute sulphuric acid. Hence it contains carbonate and acetate of ammonia. If the arm was allowed to touch the glass vessel, other salts were also found in the fluid condensed on its inside; but these salts belong properly to the sweat. The volatilizable part of the sweat is similarly composed, but it contains an excess of acetic acid. The residue of the distillation at 212° consists of chloride of potassium, acetate of potass with an excess of acid, a small quantity of chloride of sodium, phosphate of lime, a small quantity of alkaline sulphates, a trace of iron, a matter analogous to salivary matter, and other resembling osmazome. It does not contain lactic acid, the acid once supposed by Berzelius to be the lactic, being, as that author subsequently conceived, the acetic rendered less volatile being united with animal matter. The existence of iron in the sweat has been since confirmed by Professor Gmelin, who was induced by Anselmino's researches to inquire into this particular. Anselmino's Essay likewise contains a few remarks on the nature of the sweat in diseased states of the system; but his experiments on this department have been hitherto confined to its state in rhematism. The sweat of a person who had been long affected with rheumatic fever, and profuse perspiration, was of the same nature and composition as natural sweat. The critical sweat of a case of acute rhematism contained albumen, and the product of the distillation was not acid, but alkaline. Next day, after the crisis had been accomplished, it did not contain albumen."—*Ibid, from Zeitschrift für Physiologie, II. ii.* 1827.

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15. *On the Effects of Extirpating the Kidnies.*—"It has been recently proved by MM. Prevost and Dumas, that the removal of both kidnies is not necessarily followed by the cessation of the secretion of the characteristic principles of the urine; that in particular urea may be detected by a careful analysis in the blood; and that consequently we may presume the urea of the urine is not elaborated by the kidnies from the blood, but is merely separated by them from it. These results are very strikingly confirmed by experiments which have been lately published by Professor Mayer of Rome, but which appear to have been performed about the same time with those of the Swiss physiologists. Mayer remarked, that when both kidnies were removed from Guinea-pigs, the animals generally perished during the first day, and no remarkable appearance could be detected after death. But some of them lived two days and upwards, and in them, serum effused into the peritoneal sac, into the chest, and even into the brain, as well as the contents of the stomach and intestines, the testicles, epididymus, vas deferens, and vesiculæ seminales, the liver, the substance of the lungs, the whole muscles, and the blood in the heart and great vessels exhaled a decided urinous odour. These phenomena, which were remarked in several animals, clearly show that not only is the urine separated in the kidnies from the blood by a species of elective filtration, if we may use the term; but likewise, that, when this outlet is shut up, it may be separated by almost every secreting organ in the body. The author, Professor Mayer, anticipates the objection, that the urine found throughout the body might have been absorbed from what remained in the bladder at the time of the operation; and replies to it that the absorption which takes place in that organ, while its communication outwardly remains open, is far too trifling to account for the presence of so large a quantity of urinous fluid throughout the whole system. The symptoms caused by the extirpation of the kidnies, according to Mayer, are gradual diminution of the pulse and breathing, and either death in a few hours without any other particular symptom, or convulsive movements of the abdomen, accompanied with cries, as of pain, increased discharge and more fluid consistence of the fæces,

rigors, profuse secretion of tears which smell of urine, and death generally in the course of thirty hours."—*Ibid.*

16. *Superfœtation.*—M. **Delmas**, a surgeon at Rouen, relates the case of a woman who was delivered, in the public hospital of that city, of two male children at one birth, one was white, the other of a tawny colour. The patient was in the eighth month of pregnancy. The two placentæ were united, and they were expelled a few minutes after delivery. The woman confessed that she cohabited with a white man, but that she had twice yielded to the importunities of a negro, when she presumed she was about the fourth month of her pregnancy. The children lived about three hours.

PATHOLOGY.

17. *Ossification of the Tunica Vaginalis.*—M. **Yvan** lately presented to the Royal Academy of Medicine, two cases of ossification of this membrane. They had been removed from the body of a man eighty-three years of age: the testicles were perfectly sound. M. Cloquet mentioned two similar cases which he had seen with Béclard. M. Amussat had extirpated a carcinomatous testicle, which was ossified in different parts.—*Archives Générale, Jan,* 1828.

18. *Diseases of the Biliary Ducts.*—Dr. **Bouillaud** is of opinion that these diseases cannot in general be ascertained during life. Excessive dilatation of the gall-bladder, or obstruction of the ductus hepaticus, or ductus choledochus, are nearly the only exceptions to this rule. Many pathologists have mentioned hepatic colic as a consequence of the presence of biliary calculi. But none of the patients whose bodies were examined by Dr. B. had complained during life of colic. He imagines that diseases of the bile ducts, and liver, are frequently aggravated, if not originally induced, by the immoderate use of purgatives. —*Journ. Complementaire, Dec.* 1827.

19. *On Paraplegia.*—Mr. **Earle** has published in the thirteenth volume of the *Medico-Chirurgical Transactions,* a very interesting paper on paraplegia. By this term he understands "that species of palsy in which both sides of the body are affected, in contradistinction to hemiplegia, where only one side is deprived of sensation, or motion, or both." Paraplegia has generally been considered as dependent on some morbid action existing in the vertebræ or spinal canal, and producing more or less pressure on the spinal marrow, especially in the lumbar region; and this is no doubt often the case; but Mr. Earle states, that symptoms very closely resembling those produced by morbid affections of the spinal marrow, will occasionally be found to take place in chronic diseases of the brain and its membranes. Dr. Baillie has asserted that "in adults, when the spine has not suffered from outward violence, paraplegia most commonly depends on a disease of the brain itself." This Mr. Earle thinks is too general an assertion, and that many cases occur in adults, wholly dependent on diseases affecting the spinal marrow. Mr. E. thinks that these two forms of the disease may be often detected during life by close attention. In paraplegia dependent on the existence of disease in the brain, the gait of the person is peculiar and very different from that attendant on affections of the spine, very nearly resembling the vacillating steps of a drunkard. "Such paralytic persons are incapable of walking in a direct line; the limbs are loose and thrown forward with an exertion of the whole body; there is a great consciousness of feebleness in walking, and the greatest difficulty in turning round. The appearance of the eyes often much resembles those of a drunkard, particularly when the patient is at all excited or anxious." "Sensation is more impaired than in spinal affections, when it will often remain perfect after a total loss of

the locomotive powers. This impaired sensation is often peculiar, imparting an idea of some foreign body, as a leather glove or stocking being interposed. The patient appears to feel, if I may use the expression, through a false medium; the limbs are more wasted and flabby, without any spasmodic rigidity of the muscles, which so often occurs in affections of the spine. Although often accompanied with a torpid state of the bowels, aggravated no doubt by the impaired muscular power of the abdominal parietes, there has not, in any instance that I have witnessed, been any train of gastric symptoms similar to those which so constantly attend affections of the spine, especially of the dorsal region. In some instances there is the additional confirmation of an impaired state of some of the external senses, accompanied with vertigo, a sense of weight on the head, and a general disturbance of the cerebral functions. As disease advances, the power of the brain in transmitting its influence to the extremities becomes more and more circumscribed."

When the disease has proceeded to the extent above described, one or more of the mental faculties become impaired, and in such cases Mr. E. thinks no reasonable doubt can be entertained respecting the real state of the disease. In slighter and more chronic cases it is more difficult to form a correct diagnosis: Mr. E. thinks that an attention to the following circumstance will materially assist in forming a correct judgment.

"It is well known that when a nerve is stimulated or injured in any part of its course, the painful sensation is referred by the percipient mind to the sentient extremity of such nerve; the familiar instance of the pain referred to the extremity of an amputated limb, may be adduced in proof of this. The exact reverse of this takes place when there is a partial paralysis arising from morbid affection of the cerebral organs. Here the centre of the sensorial functions being impaired, it appears to be incapable of transmitting its influence to the extreme parts of the body, and thus the feet and hands gradually lose their sensation or power of motion, or both; and in such cases if the nerves supplying the limbs be irritated, *they will convey the impression of such injury only part of the distance down the limb, about as far as the commencement of the paralytic affection.* I have repeatedly examined cases of paraplegia from affection of the spine, and in no one instance have met with the same phenomenon, which I have therefore been induced to consider as diagnostic of the paralytic affection being dependent on disease of the brain or its membranes; which opinion has in several instances been confirmed by examinations after death, in which both brain and spinal marrow have been carefully investigated."

A fertile source of error relative to the seat of disease in cases of paraplegia, arises, says Mr. E. from the incurved state of the spine, which frequently takes place in paralytic affections from morbid alterations of structure or pressure on the brain. Such cases may be distinguished by placing the person on a horizontal plane, when the back will immediately and spontaneously be restored to its proper form, without causing any pain or distressing symptoms, which would certainly be produced by any attempt at extension of a diseased spine.

Paraplegia in adults is often, no doubt, produced by chronic membranous inflammation of the brain and spinal marrow conjoined.

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20. *Case in which the Foramen Ovale remained Open in an Adult, with a General Narrowing of the Aorta and Arteries, without the Morbus Cyanosus.*—"It has generally been supposed that the cause of the blue appearance of the skin in the morbus cyanosus was the aperture between the auricles of the heart continuing pervious after birth. M. Miguel has lately met with a case where this communication continued open, and yet there was no blueness of the skin; proving that the general supposed cause of the discoloration is not correct. The case is in itself interesting.

"Jean Antoine Adam, a jeweller, æt. thirty-six, came into La Charité, under M. Cayol, August, 1825. This man was fair, of small stature, and had never suffered from any severe disease; his complexion was red and white. When young, he was subject to occasional difficulties of breathing, coming on in fits, once terminating in syncope: antispasmodics usually removed them. He was married, and had several children. At the age of thirty, without any apparent cause, the fits of difficulty of breathing became more intense and more frequent. During eight days, he had daily three or four attacks, each appearing likely to terminate his existence. His face suddenly reddened, acute pain in the heart and head, with palpitations, continuing for about a minute; then he grew pale and fainted. When the attack passed, he felt quite well, till another came on. This state, (strange to say!) was looked upon as the indication of some pernicious fever, and large doses of quina were administered to stop its course, but which increased it. After continuing thus during a week between life and death, a change took place: the difficulty of breathing, which had been periodical, became constant, and increased in violence; and the head-ache became intense. Venesection was prescribed, and the man felt himself resuscitated by the operation, ("Je ressuscitai a mesure que mon sang coulait.")

"For some weeks he was relieved, when the symptoms became again aggravated. He was again bled, and with similar success; and to this frequent bleeding, and the application of leeches, he owed the preservation of his life for six years. He says himself that there were more than six thousand leeches applied, and that he was bled seventy-two times during that period.

"At the present time he presents the following symptoms: Face pale and emaciated, without the least appearance of the violet or blue colour of the lips, cheeks, ears, or any part of the body; extreme anxiety; respiration short, oppressed, and laborious; orthopnœa; short, teazing cough; the chest resonant on all points, and the respiratory murmur apparent throughout; the whole body is agitated by violent palpitations of the heart; the pulse was small, unequal, intermittent; the limbs œdematous; the abdomen large and tense, and gave an evident fluctuation; the extremities were cold, and the general temperature of the body was under the natural standard; the bowels inclined to constipation.

"M. Cayol, in his diagnosis, stated that there was considerable hypertrophy of the left ventricle, with narrowing of the orifice of the aorta by a commencing ossification of the sigmoid valves. A diuretic mixture, with half a drachm of acetate of potash, was prescribed, with half a drachm of aq. lauri cerasi.

"The patient went on getting worse and worse. The smoking datura stramonium was tried, and for a short time gave much relief. The powder of belladonna was also tried, and it appeared to sooth him a little.

"On the 11th of September he died, and the body was opened thirty-six hours after death. On opening the chest, the heart, distending the pericardium, and pressing upon the left lung, appeared twice the natural size. The right ventricle and auricle contained some clots of black blood: their size was larger than natural. The auricles communicated by an opening as large as a two-franc piece, evidently the foramen ovale, not obliterated."—*Lond. Med. and Phys. Journ. April,* 1828, *from the Revue Medicale.*

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21. *Stricture of the Colon.*—The following interesting case is related by the editors of the London Medical Repository. "A strong, stout, healthy man, aged about forty, whose bowels were habitually regular, was suddenly seized with a complete obstruction of the bowels, over which no remedies had the least influence; he had no particular pain, beyond a feeling of distention of the abdomen. At the expiration of about a fortnight, vomiting came on, which continued till his death; this took place about three weeks from the first attack. As soon as the abdomen, which was enormously distended, was laid open, the intestinal tube burst, from the pressure of its contents, and some gallons of semi-fluid materials came out. About sixteen inches from the anus there was a hard semi-cartilaginous stricture, so complete, as scarcely to admit a common-sized probe to pass through. There was no appearance of inflammation round it, nor did the tube either above or below seem at all inflamed. How the intestine can suddenly run into this state of organic disease, without exhibiting

any symptoms or subsequent appearances of inflammation, it is difficult to tell. The subject of this case was perfectly well up to the very time when the obstruction took place, and his bowels had been usually regular."—*Lond. Med. Repos. April*, 1288.

22. *Disease of the Spine.*—Mr. Auchincloss relates, in the first number of the *Glasgow Medical Journal*, a case of disease of the spine, in which the ulceration originated in, and was confined to the bone. This case tends to confirm the truth of the opinion first suggested by Mr. Brodie, regarding the difference in the nature and treatment of ulceration confined to the inter-vertebral substance, and the same disease affecting the cancellous structure of the bone.

23. *Deep-seated Tumour in the Neck.*—Dr. Syms relates, in the first number of the *Glasgow Medical Journal*, a case of obstructed respiration, and finally death, caused in a child four months old, by a tumour situated beneath the sterno-mastoid muscle, and great blood-vessels of the neck, and extending from the left side of the vertebræ to the mastoid process of the right temporal bone, and reaching to the base of the cranium behind the fauces. A small projection of it formed a tumour at the angle of the jaw, which was supposed to be a scrofulous gland. This is not the only case of this disease on record in which death has resulted from its nature not being understood. A very interesting case is related in Porter's Pathology of the Larynx and Trachea. The proper treatment is of course to open the abscess.

24. *Angina Maligna.*—M. Emangard has published in the *Annales de la Médecine Physiologique*, for March, 1828, some new documents, to prove that the angina maligna, (diphteritis of M. Bretonneau,) is not a specific phlegmasia, but an acute inflammation, attacking suddenly and extending rapidly; and that when treated with blood-letting at its commencement, its extension to the respiratory tubes and croupal suffocation is prevented.

25. *On the Peripneumonia of Children.* By Thomas Cuming, M. D. Assistant Physician to the Institution for the Diseases of Children, in Dublin.—Dr. Cuming has published in the fifth volume of the *Transactions of the Association of Fellows and Licentiates of the King and Queen's College of Physicians in Ireland*, an elaborate and interesting paper on the peripneumonia of children, or the catarrhal fever as it is usually denominated here. Passing over the well known symptoms of the disease, which are most accurately delineated, we shall present a condensed account of his pathological investigations, and the method of cure which he has found most successful.

In a very few instances traces of inflammation were found in the pleuræ, as effusions of lymph and serum, membranous adhesions, &c. In two instances the lungs were thickly studded with small gray tubercles, and in another the exterior part of either lung contained a number of tubercles, several of which were in a state of suppuration. In the two cases in which the lungs were tuberculated, a general tubercular diathesis seems to have pervaded the system, as was indicated by the existence of tubercles in the peritoneum and pleura. In one of these cases the spleen was as thickly studded with tubercles as the lungs, and in both the mesenteric and bronchial glands were enlarged.

The most frequent, indeed constant morbid change met with, is an increase in the solidity of the lung, varying in degree from that of the slightest sanguineous congestion, up to complete hepatization, (the second degree of inflammation of the lung as described by Laennec.) The inferior and posterior portion is in general principally affected, and the upper portion is often healthy or only a little congested, when the inferior portion is completely hepatised. When sanguineous congestion prevails, it is generally combined with more or less of serous effusion into the interlobular tissue of the lung; but where the lung is hepatised, its section appears dry and granular and very little serous or any other kind of effusion escapes. This increased solidity of the lung is combined in almost every case with more or less inflammation of the mucous membrane of the bronchia, extending sometimes to the trachea. In a few instances Dr. C. found the trachea and bronchia highly inflamed, and containing a considerable quantity of purulent mucus. In two cases in which no traces of inflammation could be detected in the trachea or bronchia, the air cells were filled with a purulent mucus, which exuded in abundance on making a section of the lung. Dr. C. met with but one case in which there was no appearance of disease in the mucous membrane of the trachea, bronchia, and air cells, and that was a case of pertussis combined with inflammation of the substance of the lungs, which terminated fatally by convulsions. The more intense the inflammation of the mucous membrane, and the more considerable the effusion into the bronchia, the less in general is the induration and vice versâ.

With regard to the abdominal viscera, besides the enlargement of the mesenteric glands, and tubercular depositions in the peritoneum already alluded to, in some instances Dr. C. found the liver unusually pale, in others it was in a state of sanguineous congestion, enlarged, and adherent to the parietes. In one case its surface presented a number of dun-coloured patches, which penetrated for some way into its substance. The spleen adhered in one instance to the peritoneum; in another the stomach was unusually contracted; and in two cases the small intestines were more vascular than natural, and displayed a number of intus-susceptions.

It is thus evident that the disease is a combination of bronchitis and peripneumony. As the disease is usually preceded by symptoms of catarrh, it is probable that the inflammation commences in the mucous membrane, and is propagated from thence to the substance of the lungs.

It also appears that death is caused either by "suffocation occasioned by the accumulation of fluids in the bronchia, or to that indurated state of the substance of the lungs, by which they are rendered totally impermeable to the air. While the one effect is owing to the effusion of mucous or pus into the air cells, the other seems to be the consequence of an effusion of lymph into the cellular membrane that connects the air cells."—For the treatment of this disease see Practice of Medicine, Art. 36.

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26. *Softening of the Uterus.*—Dr. Luroth has published in the fifth volume of the *Repertoire d'Anatomie,* a very interesting paper on this subject. The following is a summary of his observations:—

1. By softening, when applied to pathological anatomy, is generally understood the diminution of cohesion in organic tissues.

2. This alteration has been observed, with few exceptions only, in all the organs and tissues of the body.

3. Softening of the uterus seldom takes place but in the pregnant and puerperal states.

4. This complaint may be divided into three stages; the first, where the organ is only very flaccid, relaxed, soft, and often infiltrated with serum, but without any very remarkable alteration of structure; the second, where the uterus is very friable, and its structure altered to such a degree that its tissue presents but very weak traces of organization; and the third, in which there is a liquefaction of the part, or reduction of it, into an inorganic pulp.

5. If the softened parietes of the uterus are also thinner, the complaint may be termed atrophy of the organ.

6. The symptoms to which softening of the womb gives rise are vague and uncertain; additional cases are wanting before they can be determined with precision.

7. Softening of the uterus, and even the disposition to this alteration, may cause difficult or unnatural labour.

8. Rupture of the womb may occur with this alteration, particularly if the parietes are thin as well as softened.

9. In most cases this affection is produced or favoured by an inflammation of the organ; it is more rarely a primitive alteration, dependent on diminution of the vitality, and an anomaly in the nutritive action of the affected part.

10. The inflammation which precedes the softening has a tendency to effect a prompt disorganization, and belongs to that class which has been termed by some authors asthenic, putrid, &c.

11. Putridity of the uterus may be regarded as a kind of softening, and is generally seated in the neck of this organ.

12. Termination by resolution in putridity, as indeed in softening generally, is rare.

13. The diagnosis of these affections is difficult; an examination per vaginam, however, affords material assistance. The prognosis is always unfavourable, and the result generally fatal. No curative measures which have been devised appear to have any effect.

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27. *Phthisis Pulmonalis.*—Dr. Stokes relates in the first volume of the *Transactions of the King and Queen's College of Physicians in Ireland*, some extremely interesting cases of phthisis pulmonalis. The following are the conclusions which he has drawn from them:—

"1st. That the development of tubercles in a predisposed habit is greatly favoured by an attack of continued fever.

"2d. That in this manner death may supervene apparently from the irritation of the tubercles, even before they have gone on to suppuration.

"3d. That these cases are much more rapid in their course, and accompanied by more violent symptoms than those of ordinary phthisis.

"4th. That when the extensive development of tubercle occurs simultaneously in the lungs, and the parenchymatous organs of the abdomen, the symptoms are those of the highest degree of catarrhal and gastric fevers.

"5th. That a patient labouring under such an affection may present most of the symptoms of violent inflammation of the stomach and intestines, without having these organs at all engaged.

"6th. That tubercles of the abdominal parenchymatous organs are, to all external appearance, identical with those observed in the lungs.

"7th. That the stethoscopic indications of the sudden and general development of tubercle in the lungs are those of violent bronchitis, with some pneumonia; the lung becoming to a certain degree dull on percussion, though still every where permeable.

"8th. That in these instances the heart does not undergo that diminution in size and consistence so remarkable in the common cases of phthisis.

"9th. That in cases of phthisis rapidly supervening after fever, general suppuration of the tubercles in the lung may take place in so short a time as seven days.

"10th. That a recurrent crepitating rale in the same situation, with gradual increase of dullness of sound on percussion, may be reckoned as an excellent diagnostic of the growth of tubercle.

"11th. That disease of the valves of the heart rarely occurs in phthisis.

"12th. That in cases of phthisis with intestinal ulceration, death may be occasioned by hæmorrhage from the bowels.

"13th. That the softening of a mass of tubercular matter in the lungs may be accompanied by the symptoms indicative of the formation of a common abscess, from inflammation of any of the internal organs.

"14th. That the aphthous ulceration of the bronchial mucous membrane, when it does occur, is generally met with in the air passages leading to a cavity of long standing.

"15th. That a patient may live for upwards of five months after the opening of a fistulous communication from the lungs into the cavity of the pleura.

"16th. That displacement of the heart in cases of empyema with pneumothorax, when the fistulous communication remains open, must be attributed to the pressure of the liquid effusion alone.

"17th. That the diminished size of the lung in such cases is probably owing to some other cause than mere mechanical pressure."

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28. *Extensive alteration of nearly the whole of the Ganglionic Tissue of the Lymphatic Absorbent System.*—Dr. Pallas relates in the *Journal Universel*, for October, 1827, the case of a female who had arrived at the age of fifty-one years, without suffering from any severe disease, and whose health suddenly changed after a violent access of anger. She perceived suddenly a very painful sensation in her stomach, accompanied with extremely painful vomiting. The legs became infiltrated, and one of them was covered with an erysipelatous inflammation; small tumours appeared under the skin of both legs, and a more considerable tumefaction was developed in the right side of the neck. In this state she entered the civil hospital of Pampeluna, where she died. On examination, there was found to be considerable emaciation; the skin, which had preserved its natural colour, was studded with a great number of subjacent tumours, except in the inferior limbs; and similar ones were found between the muscular layers, beneath the mucous membrane of the tongue, in the whole extent of the mesentery, upon the sides of the vertebræ, &c. One situated between the spleen and left kidney, weighed one pound five ounces. All these tumours had the consistence and colour of a clot of blood, and were enveloped in a kind of fibrous membrane; the intestines, especially the duodenum, were red and inflamed; the mucous membrane of the stomach pale, softened, (macerée,) and tearing with ease; the liver very large. It is probable that these tumours were owing to a morbid development of lymphatic ganglions; all the vessels of this system showed marks of sanguineous congestion.

This very rare, and perhaps unique case, is valuable, says M. Pallas, as elucidating the pathology of the lymphatic system, upon which professor Brousais has already thrown so much light.—*Annales de la Medécine Physiologique, Jan.* 1828.

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29. *Inflammation of the Testicle.*—Mr. Rose says, that as far as his experience goes, inflammation of the testicle produced by the metastasis of diseased action from the urethra, is the least frequent form of the disease met with, although by most systematic writers, a suspension of the discharge from the urethra, and a subsequent return of it, are pointed out as the general accompaniments of the inflammation of the testicle. If injections are employed for the cure of discharge from the urethra, the swelling of the testicle is often ascribed to a pernicious effect produced by them; but the late Mr. Pearson observed that it was as frequent where the cure was conducted without them; and in this Mr. Rose's experience coincides with his. It is probable, observes Mr. R., from little or no discharge being present in these cases, when the testicle swells, that it is so generally believed that a sudden stoppage of it occurs when this swelling commences, so that it has even been recommended to endeavour to re-produce it, by the introduction of irritating ointment into the urethra.

Mr. R. has seen, not unfrequently, swelling of the testicle, dependent on the inflammation extending from the parts about the neck of the bladder along the vas deferens.—*London Medical Gazette, Vol. I. No.* 16.

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30. *Pneumothorax and Pleurisy, with Fistulous Communications between the Bronchia and Sac of the Pleura.*—Three cases of this extremely rare disease are recorded in the fifth volume of the *Transactions of the King and Queen's College of Physicians in Ireland;* two by Dr. Townsend, and one by Dr. Stokes. We select the following, related by Dr. Townsend, as it differs in some of its characters from any case hitherto recorded, and proves, irrefragably, the value of the stethoscope as a diagnostic agent.

A tall, well-proportioned dragoon, was attacked, in October, 1826, with cough, pain in the chest, and diarrhœa; for which he was bled, blistered, &c. A recurrence of the same symptoms called for a repetition of these measures, which, as well as several others afterwards employed, failed to produce any permanent advantage. Dr. Townsend saw him, March 25th, 1827, at which time he was up and dressed, "walked about the room, but was soon out of breath and easily fatigued. He was considerably emaciated, had much dyspnœa, not sufficient, however, to materially affect his speaking; profuse night-sweats, diarrhœa, thirst, anorexia; pulse 120, small, and vibratory; number of respirations 30. Cough most troublesome on awaking in the morning. Sputa apparently mucous, are stated to have diminished considerably in quantity within the last three weeks, from which period is also dated the aggravation of his dyspnœa. On viewing the thorax, the right side appeared considerably more dilated than the left, especially anteriorly and laterally, at its lower half. Percussion employed over the dilated surface elicited a clear, hollow sound. In this space too the respiratory murmur was perfectly inaudible; but immediately after coughing, a peculiar sound, resembling the vibrations of a porcelain jar, when gently struck, (*tintement metallique,*) was distinctly heard in a space corresponding to the posterior convexities of the sixth, seventh, and eighth ribs. This sound was not produced either by inspiration or speaking. Succussion did not produce the sound of fluctuation, although the patient said he felt water dashing against his side. In the superior part of the same side of the chest, (the right,) the dilatation was scarcely, if at all perceptible. The sound, on percussion, not particularly sonorous, and the respiratory murmur audible posteriorly.

"At the left side, the sound on percussion was natural, though considerably duller than at the right. Respiration was distinctly audible all over the lung's surface, except in the space corresponding to the superior lobe, where cavernous respiration and cough, with perfect pectoriloquy, were heard distinctly.

"*Diagnosis.*—A tubercular cavity occupies the upper lobe of the left lung. The dilatation of the right side of the chest is produced by pneumothorax, and the co-existence of the *tintement metallique* proves that the air in the pleura proceeds from a communication between the bronchia and pleura. The medium of communication in this case I conceive to be a tubercular cavity; first, because such is by far the most frequent mode of communication between those parts; and secondly, because the existence of a tubercular cavity in the opposite lung, converts the probability of this species of abscess into a moral certainty, of which no doubt could have existed, if the patient had been examined with the stethoscope, and pectoriloquy found under the right clavicle, before the accession of the pneumothorax. I attribute the comparatively dull sound on percussion, of the superior part of the thorax, and its less degree of dilatation, to the existence of ancient adhesions, which prevent the air accumulating in that region, between the pleura costalis and pulmonalis.

"To recapitulate.—The lesions I expect to find are, a tubercular cavity in the upper lobe of the left lung; the right side of the thorax distended with air and fluid, (the latter at present exists in small quantity, but its proportion will no doubt go on increasing;) in the right lung a tubercular cavity, communicating with the sac of the pleura on the one hand, and with the bronchia on the other, allowing the air inspired to pass freely into the pleura; and finally, the superior lobe united by old adhesions to its corresponding costal pleura.

"This detailed diagnosis was written and handed over to Dr. Cheyne on the evening of my first visit.

"*March 26th.*—Had no sleep last night; face expressive of considerable suffering; a bluish tint of lips and nails is perceptible. Says he feels no pain whatever. Cough peculiarly deep and hollow; slight mucous expectoration. At the right side, sound on percussion continues hollow inferiorly, even over the region usually occupied by the liver, where a full inspiration sounds precisely like blowing into an empty bottle, (*bourdonnement amphorique.*) Speaking as well as coughing, is now followed by the *tintement metallique.* In the superior part of the thorax, the sound on percussion is clear and hollow anteriorly, where also the respiratory murmur is extinct. *Quantity of gaseous effusion increases.*

"*28th.*—Does not recollect any sudden aggravation of his symptoms about the period when his breathing became materially affected. Never suffered much pain of right side; thinks, on the whole, that the other side now gives him, and has, for the last three months, uniformly given him the greater uneasiness of the two. Sits up, and walks about. Pulse 120; respirations 36. No change in the stethoscopic sounds.

"*April 1st.*—Pain of left side removed by the application of a blister; dyspnœa increased; number of respirations 38; diarrhœa; profuse night sweats. At the right side, sound on percussion is become dull posteriorly in the space corresponding to the inferior portion of the thoracic cavity, where no sound whatever can be heard. *Fluid accumulates.* Above the eighth rib, the sound on percussion is hollow; the ordinary inspirations sound like blowing into a bottle. Expiration is followed by a musical sound, resembling the vibrations of a fine wire chord. Coughing produces a peculiar sound, exactly similar to the ringing of a porcelain jar; the voice much more obscurely so. On making the patient sit up in bed, and shaking him gently by the shoulder, (the stethoscope being applied posteriorly about the convexity of the seventh rib,) a fluid is clearly heard dashing against the sides of the thorax. The patient is sensible of this fluctuation, says *he* hears it, though *I* could not without applying my ear. When he suddenly rises from the recumbent posture, three or four drops are heard to fall successively from above on the surface of a fluid. This sound also is most distinctly heard over the seventh rib posteriorly. In the left lung, pectoriloquy, &c. as before. Feels no pain whatever in right side. I, in consequence, added to my former diagnosis, that the constant absence of pain probably proceeded from a thick coating of albuminous exudation, the product of chronic inflammation, which lines the pleura, and defends it from the contact of the air."

The symptoms gradually became aggravated, and on the fourteenth there were "profuse night sweats; colliquative diarrhœa; stools consisting of a black matter, resembling coffee-grounds; great prostration of strength; increase of dyspnœa, though it never became extreme up to the time of his death, which occurred on the afternoon of this day.

"*Dissection, forty hours after death.*—External appearances. Body well proportioned; considerable emaciation; legs and feet slightly œdematous; the right side appeared considerably more dilated than the left, but on measuring with a tape, the greatest difference was found not to exceed one inch and a half.

"On employing succussion, fluctuation was heard by applying the ear to the chest, but was not audible to the bystanders.

"Thorax. The right side.—A trocar was introduced between the fifth and sixth ribs near their junction with their cartilages—an immediate rush of air followed." On removing the sternum, a vast unoccupied space was observed in the anterior part of the thorax, capable of containing fully two quarts of water. This space had been occupied by air; which may consequently be estimated at that quantity. The lung just appeared above the surface of the fluid, which occupied the posterior region of the thorax; it was closely compressed against the spine, and seemed reduced to one-third of its natural dimensions. The fluid effused might be in quantity about two quarts, was of a yellowish-green colour, tolerably clear at its surface, but rendered turbid at bottom by numerous fragments of opaque, puriform flocculi of albumen.

"Before touching the lung, in order to guard against an accidental formation of the opening which I expected to find, an incision was made into the trachea, and the pipe of a pair of bellows introduced. The air passed freely through the lung, and appeared in bubbles at the surface of the fluid, in which it was immersed. The fluid being removed, the upper lobe of the lung was found in close contact with, and firmly attached to the costal pleura. The whole surface of the lung, except where it was attached, was coated with an albuminous exudation of a dirty white colour, of several lines thickness, its suface wrinkled, not unlike the rind of a shrivelled apple. The costal, mediastinal, and diaphragmatic pleuræ were still more thickly coated with this exudation, which, though firmly attached to the subjacent pleura, and apparently incorporated with it, might by careful dissection, be separated from it, leaving the membrane underneath in a state of perfect integrity. The lung was now detached; on its anterior surface, about two inches from the summit of the upper lobe, was discovered a fistulous orifice, capable of receiving my little finger, its margin well defined, rounded, and nearly cartilaginous. A probe introduced passed readily through a series of small tubercular cavities into one of the principal bronchia. At intervals of half an inch below this fistulous orifice existed three small oval superficial ulcers, which, on close examination, did not appear to communicate with the bronchia. They were evidently formed by softened tubercles, developed immediately under the pleura; for on different parts of the lung's surface there were several similar oval nests of tubercles, some not yet softened, others quite soft, and elevating the pleura, through which they had not as yet formed a passage. Posteriorly near the root of the lung, and about the base of the superior lobe, immediately underneath its adhesion to the pleura, was another fistulous opening, of half an inch in diameter, which communicated by a long sinuous passage with a large tubercular abscess occupying nearly the whole upper lobe. This passage was lined all through by a higly vascular membrane, exactly similar to that which lined the tubercular abscess, having its surface coated with a layer of lymph. Into this vast abscess was also traced one of the principal bronchial divisions; its entry into the cavity was within a few lines of that of the sinuous passage above described. The middle and lower lobes contained several tubercles. The bronchial glands also were much enlarged, and studded with tubercles.

"The left side of chest.—This lung was studded throughout with granular tubercles of the size of duck-shot. In the superior lobe was found one cavity, capable of containing a large filbert, and communicating with two or three smaller ones. In the middle lobe, (the left lung had three lobes,) the tubercles were all opaque and whitish. In the inferior many of them were in the first, or greyish, semi-transparent stage.

"The heart was small, flaccid, and pale.

"*Abdomen.*—All the viscera occupied their natural situations, except the liver, the inferior margin of which nearly touched the crest of the ilium. Mesenteric glands much enlarged, some of them studded with tubercles. Stomach much distended with flatus; its mucous membrane reduced to a pulpy mass, and easily scraped off with the scalpel. The ileum was considerably ulcerated near its entry into the cæcum, which, as well as the colon, presented several patches of ulceration, and contained a large quantity of the coffee-grounds matter, similar to what had been evacuated. This matter was first met with in the cæcum, as the ilium seemed perfectly free from it. Liver appeared healthy.

"This case of pleurisy with pneumothorax, differs from any other that I have seen recorded, in the total absence of pain in the side affected, in not having its commencement marked by any violent or sudden symptoms of dyspnœa or pain, and also in this, that the patient was able almost to the time of his death to dress himself and sit up; whereas M. Laennec expressly states, that in all the cases which he had seen, the patients were excessively oppressed, and unable to quit their beds. Indeed he lays down these circumstances, as adjuvant diagnostic marks, whereby to distinguish this disease from emphysema. But in this instance such minor distinguishing features were not necessary. The great distention of the right side of chest, its remarkable sonoriety, the total absence of respiration, unless where the lung was attached, the extraordinary development of the pathognomonic signs, all established, beyond the possibility of doubt, the precise nature of the disease. I shall only add, that the dull sound supervening inferiorly, and gradually ascending, the increasing capacity and sonoriety of the superior part of the thorax, together with the increased extent of surface over which the pathognomonic sounds were heard, did all, and each of them, mark exactly the progress of the disease from day to day, up to the period of its fatal termination.

"I know that it has been often urged, as an objection to the use of the stethoscope, that it is impossible to convey, by description, an accurate idea of sounds; and that for this reason none but those persons who have studied under the author of mediate auscultation, can be sure that they refer each sound to its proper denomination. I can only reply to this objection by stating, that although, during my attendance on the wards of M. Laennec, I never had an opportunity of studying these sounds, the *tintement metallique* and *bourdonnement amphorique*, yet so precisely did they answer his description, that I felt not the least difficulty in recognizing them; and so perfectly was I convinced of their identity, that I hesitated not, on the evidence of sounds I had never before heard, to pronounce on the existence of a morbid lesion I had never previously seen, and I appeal to the result, if my confidence was not justified."

MATERIA MEDICA.

31. *Hydrocyanic Acid.*—Dr. Ryan states that he has used this medicine in numerous cases of severe pulmonary disease, in functional and organic diseases of the heart, and in violent cases of asthma, dyspnœa, and orthopnœa, with the most marked advantage.—*Transactions of the College of Physician in Ireland, Vol. V.*

32. *Artemesia Vulgaris in Chorea.*—The artemisia vulgaris, which was first recommended by Dr. Burdach for the cure of epilepsy, is stated by Dr. Gittermann to be very efficacious in other nervous diseases. He relates a case of very obstinate chorea St. Viti, which was cured by it after flores zinci. together with rad. valerianæ, and cuprum sulphurico-ammoniatum had been a long time used in vain.—*Hufeland and Osann's Journal der pract. Heilkunde, January*, 1826.

33. *Radix Caincæ.*—The materia medica has received a new and very valuable acquisition in the radix caincæ—stated to be an effective remedy for dropsy. In a treatise by Von Langsdorf, on the use of the radix caincæ, he says, the root of this plant is known in the province of Minas Geraes, in Brazil, as a very efficient remedy. It acts as a drastic and tonic purge, a good diuretic, and a most effective emmenagogue. The vomitings, which frequently take place, are not to be ascribed to any emetic power which it may possess, but to its bad, volatile, and disgusting smell and taste. It has been found successful as a means to strengthen over-excited nerves, and has been useful in hysteric attacks. But the principal effect of this root is, that it is an effectual remedy for dropsy. It is taken, after having been infused in boiling water, in the following form: ℞. Rad. caincæ conc. ʒij. coq. e. aq. comm. libr. una. ad consist. ℥viij. s. bis, ter, quaterve in die cochlearia duo magna sumenda.

It appears hence, that this remedy belongs to the class of those antihydropics which carry the water off, like gummi guttæ, elaterium, colocynth, bryonia, &c. by means of resinous drastic constituents, by which stools, as well as an increased secretion of urine, are promoted. Dr. Vogel, of Rostock, has communicated a case in which it has been eminently successful.—*Ibid.*

34. *Oil of the Euphorbia Lathyris.*—Calderini recommends the oil expressed from the seeds of the euphorbia lathyris as a purgative. According to his experience, it has the following properties: "1. It acts safely and purges gently, and produces at the same time by no means an injurious effect, neither vomiting nor any disagreeable feelings in the stomach, nor tenesmus, and can be taken even when the intestines are highly irritated. 2. With regard to the strength of its operation, it differs but little from the croton oil. 3. The dose for adults is, according to their constitutions, from four to eight drops; for children, from

two to three drops; for very sensitive patients, in form of an emulsion. 4. As it possesses neither a very strong taste nor smell, it may be easily taken by patients who otherwise have a great aversion to medicine.—*Ibid.*

35. *New Preparation of Opium.*—**Joseph Houlton**, Esq. has been lately employing a preparation of opium, the action of which as a sedative, has been so highly satisfactory as to lead him to believe it will be found to possess the same, if not superior, medicinal powers to the black drop. He calls it *liquor opii acetatis.* The following is his formula for its preparation. Take of Beaufoy's strong acid, f℥j. distilled water, f℥ix. opium, ℥ijss. Macerate with a gentle heat for five days, and strain. Five minims are equal to one grain of opium.—*Lond. Med. Repos. and Rev. May*, 1828.

PRACTICE OF MEDICINE.

36. *Treatment of the Peripneumonia of Children.* By **Thomas Cuming**, M. D.—The indications of cure in this disease, according to Dr. Cuming, are threefold; 1st, to arrest inflammation before effusion takes place; 2d, where effusion has taken place to prevent its increase; 3d, to promote its absorption or expectoration.

"To accomplish the first indication," says Dr. C. "the most powerful remedy we possess is blood-letting; and, provided the disease be seen at its very commencement, we may not unfrequently extinguish it in its birth. In this early stage the breathing is loud and distinctly audible; it is not wheezing, the former arising from the straitening of the air-passages, occasioned by the turgid state of their mucous membrane. It rarely, however, happens that our assistance is required before a certain degree of effusion has taken place, as is evinced by the wheezing of the respiration. We can seldom, therefore, expect to conduct the disease to a favourable termination, except through the medium of a free expectoration." When effusion has taken place, provided it be not in excess, Dr. C. considers it as a favourable symptom. He very justly remarks, that it is a great mistake to suppose that children do not bear bleeding well, or that the diseases to which they are liable do not require it. The earlier blood-letting is performed the less occasion in general will there be for its repetition. The quantity of blood to be drawn, and the necessity for its repetition, must be determined by the age and constitution of the patient, the violence of the symptoms, &c. In an infant under six months, though general blood-letting may often be required, Dr. C. says that the application of leeches to the back of the hand or foot will, for the most part, answer the purpose, where a vein, which is frequently the case, cannot be found. He thinks it better to apply the leeches to the hand or foot than to the thorax, as the bleeding is easily stopped by placing compresses of lint over the bites, and securing as after the operation of venesection. When blood cannot be procured from a vein in the arm it may usually be obtained from one on the back of the hand, or if we fail there, from the jugular. When blood-letting is carried too far, a state of nervous agitation and general commotion is sometimes induced, which, if not speedily removed, may terminate in death. The best remedies in these circumstances, are a horizontal position, cool air, and a drop or two of the tincture of opium. Though indispensable in the beginning of this disease, blood-letting cannot be practised with safety, Dr. C. thinks, after an abundant effusion has taken place in the bronchia. Where venesection might appear hazardous, we may sometimes have recourse to local blood-letting with benefit. Still however, if the debility is very great, even topical depletion may be attended with danger: and we must then place our reliance on blisters, and the other remedies presently to be mentioned; but Dr. C. remarks, if the disease has been uninfluenced by treatment in its first stage, little else will remain for the practitioner than to witness its resistless march to a fatal termination in the second.

As auxiliary to blood-letting, the best effect is often obtained from other evacuants, particularly purgatives and emetics. It is in the early stage of the disease, previous to the occurrence of much effusion, that purgatives will be found most serviceable. When the inflammation of the lungs is combined with disease in the abdominal viscera, as, for instance, hepatic disease, purgatives are of eminent utility, particularly mercurial ones. When the bronchiæ are oppressed with effusion, and the powers of the system much sunk, Dr. C. thinks that purgatives cannot be persisted in with safety. The purgative usually employed by Dr. C. is a combination of calomel and jalap, and when the bowels have been well opened by it, he keeps up their action by administering a grain of ipecacuanha with one of calomel every two, three, or four hours. This combination not unfrequently excites vomiting as well as catharsis; and when this effect is produced, it is generally of service to the patient.

When the lungs are much oppressed, Dr. C. says that he has often observed the greatest relief to follow the administration of an emetic. He employs the tartar emetic; and he says he has never seen any ill effects follow its exhibition.

"The preceding remedies having been used, a blister," says Dr. C. "should be applied to the chest, or between the shoulders; and when both chest and shoulders had been blistered, I have known good effects to follow the application of a blister to either side. In applying blisters to infants we must take particular care not to allow them to remain on for more than three or four hours. When a blister is applied for a longer period, excessive general irritation is apt to be induced; and such is the delicacy of the infant skin, that the blistered parts not unfrequently become gangrenous. Under such circumstances the death of the child has been sometimes the consequence. Though vesications may not have formed at the time the blister is removed, they generally take place after the application of the dressing. In some habits the blistered surface takes on an unhealthy action, and runs into eating and irritable ulcers, which are long in healing. In such cases I have found an emollient poultice, when the inflammation is considerable, and afterwards the black and yellow washes, the most useful applications. In infants of an irritable habit it will sometimes be advisable to dilute the blistering plaster with an equal quantity of the emplastrum ceræ. My friend and colleague, Dr. Charles Johnson, who has had much experience in the diseases of children, considers this combination preferable in many instances to the emplastrum cantharides of the pharmacopœia.

"In the advanced stage of the disease, when the debility is great, and suffocation appears to be impending, our principal reliance must be placed upon the administration of stimulants. Of these, perhaps, the best is the carbonate of ammonia, which may be given in the dose of three or four grains every third or fourth hour, according to circumstances. The decoction of seneka will form a suitable vehicle for the ammonia, and from the expectorant quality which it seems to possess, it may probably enhance the efficacy of the latter. When the prostration is extreme, wine and other cordials may be had recourse to; but in general these, as well as the carbonate of ammonia, will prove of little avail, suffocation taking place before the system has recovered strength sufficient for the expulsion of the fluid from the bronchia."—*Transactions of the Dublin College, Vol. V.*

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37. *Hydro-sulphuric Acid in Metallic Colic.*—MM. Chevalier and Rayer have given the hydro-sulphuric acid in several cases of saturnine colic, also in a case of colic occurring in a person employed in the manufacture of pro-cloruret of mercury, and with decided advantage.—*Bulletin des Sciences Médicales, December*, 1827.

38. *Recovery from Drowning.*—M. **Bourgeois** had occasion to give assistance in a case, where after a person had been twenty minutes under water, he was taken out, and, by a very common but serious mistake, carried with his head downwards. The usual means were tried unremittingly, but unsuccessfully, for a whole hour, but at the end of that time a little blood flowed from a vein that had been opened, and a ligature being placed on the arm, ten ounces of blood were withdrawn: the circulation and respiration were then gradually re-established, horrible convulsions, and a frightful state of tetanus coming on at the same time; copious bleeding was again effected, after which a propensity to sleep came on: a third bleeding the following morning was followed by the recovery of the patient. Hence M. B. concludes that the means of recovering a drowned person should never be abandoned until the decomposition of the body has commenced.—*Edinburgh New Philos. Journ. from the Bull. Univ. C. XI.* 213.

39. *Ammoniacal Sulphate of Copper in Epilepsy.*—Dr. **Urban**, of Bernstadt, recommends the ammoniacal sulphate of copper in epilepsy, when purely nervous. He relates five cases in which its employment has been entirely successful. The first was that of a young man, in whom the fits were renewed every fortnight, unaccompanied with any other affection, excepting a spitting of blood, which was combated in the first place with bleeding and other antiphlogistic means. The attacks of epilepsy afterwards persisting with their former violence, Dr. Urban prescribed eight grains of the ammoniacal sulphate of copper, to be mixed with twenty-four grains of sugar, and twenty-four grains of crumb of bread, and formed into forty-eight pills, of which the patient took three morning and evening, increasing the dose by one pill every two days. The young man had only five fits from this period, each at a longer interval than the preceding, and he has now remained well two years.

In the second case, the epilepsy was produced by the sudden intelligence of the woman's husband having been assassinated, and the medicine was given in rather smaller doses, and in the form of powders. The first six powders, however, produced nausea and vomiting, and it became necessary to omit them for a day. They were afterwards resumed in the same dose, which was at length increased to the amount of one grain of the salt in the day. It is to be remarked, that in this case the attacks were not diminished in frequency for some time, but they soon became of shorter duration and less violence. She finally recovered, after having taken twenty-six grains of the salt altogether.—*Hufeland's Journal.*

40. *Case of extreme Difficulty of Respiration Successfully Treated by Hydrocyanic Acid.* By **Michael Ryan**, M. D.—Mrs. C. æt. 23, was suddenly seized, in consequence of exposure to the night air, with pain in her chest and extreme difficulty of breathing, so urgent as to threaten almost instant suffocation. She was bled to eight ounces without relief. The next day, September 26th, 1825, Dr. Ryan was called to see her. He found her sitting up in bed, her breathing very laborious, with inspirations long, expirations short, terminated by moans; face pale; lips livid; features relaxed; eyes glassy; no pulse could be felt at the wrist; heart's action feeble and indistinct; hands and feet covered with a cold, clammy perspiration; speech and intellect unaffected. From repeated trials of hydrocyanic acid, Dr. R. felt convinced that it was a most efficacious remedy in relieving difficult respiration and oppressed circulation, and that therefore it was peculiarly adapted to the present case, and as the symptoms were so extremely urgent, he determined to push the use of the acid until it produced most sensible effects. Accordingly, six minims of the acid, as prepared by Scheele, were mixed in two ounces of distilled water, with one drachm of compound spirit of lavender. Of this she was to take half an ounce every ten minutes, until breathing was in some manner affected. If relief was obtained by the first, second, or third dose, the medicine was ordered to be repeated not oftener than every half hour, and to be discontinued altogether, and a little

brandy substituted, if sudden weakness, head-ache, or fainting should supervene. 4 P. M. Breathing much easier, and the patient altogether wonderfully relieved: complains of some debility. 6 P. M. Not so well; complains much more of weakness. Brandy in small quantities during the next hour. 7 P. M. Pulse very weak, small, and frequent. Says she experienced the greatest relief from the mixture, which is all taken; but the shortness of the breathing has been increasing for the last two hours, and is now as violent as at two P. M. Her countenance expresses extreme anxiety. On the whole, her case seems perfectly hopeless. Ordered eight minims of the acid with two grains of tartar emetic, in two ounces of distilled water; half an ounce to be taken as before directed.

27th, 8 o'clock A. M.—Took four doses of the medicine between twenty minutes past eight and nine o'clock, last night, when considerable ease was obtained. The last dose was taken at ten, soon after which her body recovered its natural temperature; sleep also supervened, and continued till this morning. At present, countenance natural; breathing easy; no pain in any part of chest; pulse one hundred, stronger and fuller. The mixture has acted on her stomach and bowels, though she had previously taken two ounces of castor oil without effect. She wishes for broth, and considers herself well. The enormous dose of fourteen drops of the acid, was thus taken, in eight hours, with advantage.—*Transactions of the College of Physicians in Ireland, Vol. V.*

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41. *Hemiplegia cured by the Alcoholic extract of Nux Vomica.*—Rosa Baffoe, æt. fifty-six, experienced fifteen years before, during her pregnancy, an apoplectic attack, of which she had been cured, a slight impediment in her speech only remaining. In August, 1824, she had another and more violent attack. Dr. Chiavelli employed for some time an antiphlogistic and revulsive treatment, as general and local bleedings, purgatives, &c. under which the symptoms menacing cerebral congestion disappeared, but an incomplete paralysis of the left side remained. The arm was completely paralysed, but the leg could perform some movements. M. C. then proposed trying the strychnine, which is considered by M. Magendie as possessing a peculiar influence on the spinal marrow. On account of the debilitated state of the patient, M. C. was unwilling to employ the pure strychnine, and only ventured on the alcoholic extract of nux vomica, which was at first given in doses of half a grain, and subsequently increased to one and two grains, morning and evening. The remedy was continued during five days, when is produced considerable excitement and disturbance in the system, which were removed by bleeding, diet, &c. and the patient recovered the use of her limbs.—*Journal des Progrès, Vol. VII, from the Giorn. Critic. di Med. Anal. Milano, Sept.* 1827.

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42. *On the use of Emetics of Ipecacuanha in Menorrhagia.* By JONATHAN OSBORNE, M. B. of Dublin.—In a paper on the use of emetics in hæmorrhage, by Professor Chapman, in our last number, a striking instance was related, illustrative of the utility of this class of medicines in menorrhagia. The *Fifth Volume of the Transactions of the Association of Fellows and Licentiates of the King and Queen's College of Physicians in Ireland,* contains further evidence to the same effect, by Dr. Osborne. This is an interesting coincidence: the transactions of the Irish college has been received since the publication of our last number, and the French Journal has never, we believe, reached this country; moreover, Professor Chapman has for several years, in his lectures, taught the value of emetics in menorrhagia. Dr. O. says that his attention was first excited by an article in the sixty-ninth volume of the *Journal Général de Médecine,* in which M. Caffin describes cases in which emetics of ipecacuanha were followed by the immediate disappearance of the discharge. Having witnessed a case which resisted the usual remedies, Dr. O. determined to submit this practice to the test of experience.

He began the use of ipecacuanha by ordering a scruple to be taken as an emetic at night, and generally directed an acidulous saline purgative in the morning. The effect produced exceeded his most sanguine expectations. The discharge either ceased within twenty-four hours, or was so much diminished that no more remedies were necessary to insure its entire removal. In some few cases it recurred within a short time, but when this did happen it was only necessary to repeat the emetic once or twice, in order to produce a permanent effect. He says that he met with a few individuals in whom the discharge continued with little alteration after the first emetic, but with these he had only to repeat the remedy on the following night; and in one case alone three emetics were taken before the desired effect was produced. It acts, he adds, "no less in menorrhagia, accompanied by high excitement and full pulse, than in states of great exhaustion; and its general operation is so mild as to present no obstacle to its use, even in cases of the greatest prostration of strength.

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43. *On the treatment of Intermittent Fever by the Application of Sulphate of Kina to the Skin.*—" Doubts have been justly entertained whether the skin is capable of absorbing substances applied to it, unless the cuticle is previously abraded, or the substance is thrust through the cuticle by friction. It is agreed on all hands, however, that the surface of the true skin, stripped of its protecting cuticle, absorbs with rapidity; and our readers are probably aware that advantage has been lately taken of this physiological fact in order to introduce into the system medicines which cannot be administered in sufficient quantity internally. M. Lesieur of Paris seems to have been the first who suggested the method now alluded to, and it has been since applied by himself and others to the administration of various active remedies. The paper of which a short analysis follows, is descriptive of the mode of treating intermittent fever by sulphate of kina administered in this way; and certainly the success and advantages held out by the author, M. de Martin, are very flattering. He states, that when the sulphate of kina is applied in a convenient form to a freshly blistered surface, it never, even when used in small quantities, fails to check the disease at once. In a state of purity it is ineligible, as it very soon irritates and inflames the surface of the true skin which is exposed to it, exciting livid redness, causing the formation of a gelatinous pseudo-membrane, and even destroying here and there the vitality of the surface of the skin, so as to produce small superficial sloughs. But when it is mixed in a state of fine powder with cerate, no such effects are produced, and in a short time it all disappears. The advantages of introducing the remedy through this channel are, first, that it can be safely and efficaciously used when owing to irritation or congestion in the alimentary canal it is either unsafe to administer it internally, or useless, on account of its being rapidly discharged by vomiting or purging; secondly, that a less dose acts with equal power; thirdly, that it acts more rapidly as the system is sooner brought under its influence; and lastly, that it can easily be administered to those who are averse to take internal remedies, and more particularly to refractory children.—The circumstances connected with the action of kina through the skin illustrate well its mode of operation. M. de Martin remarks, that it cannot act by effecting a revulsion, or as a counter-irritant, because local irritation is not only not necessary to success, but even also prejudicial; for he has invariably found that the remedy was least certain in its effects, and that the largest doses were required when inflammation was excited. This is easily explained on the principle that it acts through absorption; for the gelatinous effusion which is thrown out in the cases in which inflammation is caused obstructs its access to the absorbing surface. In point of fact, a great part of the powder always disappears when inflammation is not produced. The following cases will serve as examples of the author's plan of treatment. *Case VI.* A stout man, thirty-five years of age, had been affected for three months with a quartan ague, which had been checked four times by various preparations of cinchona. In the fifth attack, M. de Martin found him at the commencement of the fit with a frequent, strong, hard pulse, intense heat, flushed countenance, frequent strong cough, mucous expec-

toration, short breathing, pain under the left nipple, and a dry, red tongue. On account of the pulmonic affection, sixteen ounces of blood were taken from the arm. The fit returned again three days afterwards. Next morning, a blister having been applied three days before, and the part continuing to present a fresh surface, six grains of sulphate of kina were mixed with the cerate with which it was dressed, and twenty-four hours afterwards the dressing was changed, and six grains more applied in the same manner. He had not any return of the fit, and from that time improved rapidly in general health. The blistered surface was not in the slightest degree irritated. *Case V.* A woman twenty-three years of age, long liable to pulmonary catarrh, and affected for a year previous with wandering pains in the chest, oppression there, and dry cough, was attacked towards the end of November, 1826, with quotidian ague, of which she was cured by the internal exhibition of sulphate of kina. Towards the close of December the disease returned, still in the quotidian form. During the fit the heat was intense, the pulse strong and frequent, the general oppression considerable, the breathing difficult, and interrupted by paroxysms of violent cough. She was bled to eight ounces during the second paroxysm. On the morning of the third day, four grains of sulphate of kina, mixed with cerate, were applied to an old blistered surface. The paroxysm never returned. The dressing was renewed every twenty-four hours for four days. The cough and difficulty in breathing continued after the ague had long ceased. The blistered part became somewhat red at first, and a thin pseudo-membrane was formed; but the irritation, slight from the beginning, gradually diminished, and at length disappeared before the fourth dressing. *Case II.* This case exemplifies the kind of local inflammation which is caused by the remedy when not mingled with unctuous substances, as well as the effect of the inflammation in preventing its being absorbed. A soldier had suffered in the course of five months repeated attacks of tertian intermittent, and came under M. de Martin's care after the third paroxysm of a relapse. On the morning of the day on which he expected another, six grains of powdered sulphate of kina were sprinkled on a freshly blistered surface. The paroxysm appeared soon afterwards. Next morning the blistered surface had a deep red colour, was covered with a gelatinous exudation, and likewise showed here and there little yellow spots, which consisted of particles of kina covering little depressions in the cutis vera. Six grains of sulphate of kina were again applied, however. But now the pain became so intense, and the surface so red, that it was necessary to remove the powder, and apply a poultice. On the third morning the blistered part was covered with a thick, livid, moist eschar, having red edges, from which serum was discharged. The paroxysm reappeared this day, and again on the third, fifth, seventh, and ninth days afterwards. During this period the eschar became first black and dry, then round the edge soft and yellowish; and this softening extended inwards in the way usual with superficial eschars of the skin. After the sixth paroxysm the sulphate of kina was given internally, with the effect of checking the disease at once."—*Edinburgh Medical and Surgical Journal, April,* 1828, *from the Revue Médicale, Sept.* 1827.

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44. *On the Use of Tannin as a remedy for Menorrhagia.*—Dr. Porta has employed the tannin in the treatment of menorrhagia, for three years with great success, it having failed only twice during that period. "The general results he has been led to by his practical experience are, that tannin has a special action on the uterus when the hæmorrhage is active, whether it arises from chronic or acute metritis, but that in the latter case the inflammation must be previously combated by repeated copious blood-letting; that it is not of any use in hæmorrhage connected with organic disease of the uterus; and that its action is very rapid, while the quantity required to effect a cure is so small as to be easily borne on the stomach. He has published several of the cases which have led him to these conclusions. The following is an abstract of a few of them. *Case I.* A woman of middle age, and of a bilious, irritable temperament, after

recovering from a severe attack of miliary fever, was attacked during convalescence with considerable uterine hæmorrhage. Conceiving at first that it was nothing more than a premature appearance of the catamenia, she for some time paid little attention to it; but after it had continued several weeks, and had greatly reduced her strength, she became alarmed, and consulted Dr. Porta. He ordered her to take two grains of tannin every two hours, and in two days the hæmorrhage ceased altogether. *Case II.* A woman, thirty-two years of age, of delicate habit, and nursing a child four months old, was seized with uterine hæmorrhage, which, like the former patient, she at first imagined to be the catamenial discharge. As it continued, however, much longer than usual, and was rapidly enfeebling her, she had recourse to Dr. Porta, who found that she had been twenty days ill, and that she was affected with lumbar pains, some swelling and tenderness of the hypogastrium and symptomatic fever. He directed her to take a pill containing three grains of tannin every third hour; and she took only eight of them when the hæmorrhage entirely ceased. *Case III.* A woman of irritable, sanguine temperament, and thirty-eight years of age, had been affected for three weeks with menorrhagia, when Dr. Porta was called to visit her. He found that pressure on the hypogastrium excited pain there, shooting towards the loins, that the pulse was hurried, and that she was liable to sudden paroxysms of pyrexia. As there was not, however, any notable swelling in the hypogastrium, he ordered the tannin without any preliminary treatment, and the same quantity was given as in the last case. In the course of two days about two scruples were taken, upon which the hæmorrhage was permanently checked. *Case IV.* A young woman of robust habit was attacked with profuse hæmorrhage from the uterus, by which in the course of a few weeks she was reduced to a state of great exhaustion. Notwithstanding her state, and the large quantity of blood she had lost, the pulse was frequent and full, and the hypogastrium was tumid and tender. Dr. Porta immediately ordered her to cease taking wine and tonic drinks, which had been given her up to that time, and directed three grains of tannin to be administered every third hour. Towards the close of the fourth day the hæmorrhage ceased. The lumbar pains which usually accompany the disease, continued a few days longer."—*Annali Universali de Medicina, April,* 1827.

45. *Carbonate of Soda in Goitre.*—HUFELAND mentions that the effect of the carbonate of soda in diminishing goitre is completely confirmed. A young lady who had suffered for many years from swelling of the glands of the throat, which had latterly increased, and was not only disagreeable from its appearance, but impeded also her voice and breathing, has taken, since three weeks, a solution of carb. sodæ, ʒij. solve in aq. melissæ, ℥vj. syrup cinam. ℥ss. s. daily, four times, a table-spoonful, and the swollen glands are now of but half their former size. He says he shall certainly never order again the iodine to be taken internally, nor even the burnt sponge, as the application of the latter, even, is always precarious with persons who are disposed to phthisis and spitting of blood.—*Hufeland and Osann's Journal der pract. Heilkunde, February,* 1828.

46. *Cremor Tartar in Gravel.*—Dr. WOEHLER illustrates the beneficial effect of the cremor tartar in those disposed to gravel, adducing two cases from Chelius and Gmelin, in which the gravel, consisting of uric acid, was removed by its use. At the same time, he mentions from his own practice, the case of a man who seemed to suffer from stone in the kidneys, and constantly passed urine consisting of uric acid. In this case he also resorted to cremor tartar, upon which the urine became clear, containing no gravel; at the same time the patient discharged a rough stone from the kidney, consisting of uric acid.—*Ibid, Jan.* 1827.

47. *Extract of Fern as a cure for Tape Worm.*—According to letters from Switzerland, the extract of the rad. filicis maris, made with ether, recommend-

ed by **Peshier**, is frequently used, and with the greatest success, as a remedy against the tape-worm.—*Ibid.*

48. *On the Treatment of Burns by* Dr. **Heine**.—After severe burns, especially those of the feet, the injured parts in successively drying, acquire a coriacious hardness, in consequence of which the subjacent parts are contracted and compressed, producing excessive pain. Emollient applications are useless in such cases. Dr. Heine recommends as the only effectual means of affording relief, removing with a bistoury the whole of the coriaceous part. The contracted parts then assume their natural situation, suppuration occurs, and the wound heals. The delicate and sensible skin which covers the injured place, is remarkably disposed to inflame and break out in small ulcers, from the slightest irritation, and the whole limb is subject to swell. To prevent these occurrences Dr. H. encircles the foot and leg with a bandage, which he continues for a considerable time.—*Rust's Magazin, Vol. XXIV.* 1827.

49. *Artemesia Vulgaris, in Epilepsy.*—For several years many experiments have been tried in Germany, which appear to prove the anti-epileptic powers of the Artemesia vulgaris. By many authors its virtues have been much extolled: Dr. Burdach and Professor Hufeland, have used it, gathered in October, and reduced to powder, with much success in many cases of epilepsy. The dose is from fifty to seventy grains. It has been generally given in warm small-beer. A copious perspiration mostly follows, and a few doses have frequently succeeded in effecting a cure. The cases in which the Artemesia has been most beneficial, have been those in which the paroxysms of the disease occurred frequently and periodically. Very satisfactory evidence is adduced upon this subject by E. Graefe, who speaks confidently of the anti-epileptic powers of this medicine. According to the latter authority, it has been used with equal success in cases of catalepsy, but requires to be continued for a longer time than in epilepsy. Neither the infusion nor the decoction of the root can be depended upon. In one case of epilepsy recorded by Graefe, the patient had been afflicted with the disease for several years. He took two ounces of the powdered Artemesia, in divided doses. The violence of the paroxysms gradually subsided, and in one month from the first employment of the remedy they entirely ceased. In the second case of a cataleptic woman, it was equally successful, after various other means had been employed in vain. This patient took altogether four ounces of the powder.—*Hufeland and Osann's Journal.*

50. *Juice of the Hemlock in Itch.*—Dr. **Pellegrini** has found the external application of the hemlock juice highly efficacious in curing the itch; the pustules are to be bathed with it for five or six days. Dr. P. employs the juice expressed from the fresh leaves, but he says that the extract, decoction, or powder of the leaves is equally efficacious, and that he never failed in effecting a cure.—*Lond. Med. Gaz. Vol. I. No.* 6.

51. *Treatment of Erysipelas.*—The English surgeons appear to have become convinced of the utility of topical depletion in the treatment of phlegmonous erysipelas, but much difference of opinion exists among them with respect to the best mode of effecting this. Mr. Lawrence, Mr. Brodie, and some others, advise extensive incisions: Mr. Hutchinson, on the contrary, and his followers, recommend short incisions; Dr. Babington punctures with the point of a lancet, and Mr. Travers detracts blood by leeches. The recent Journals contain cases successfully treated by each of these methods. It is objected to the long incisions that they are dangerous, and two cases are related in which fatal hæmorrhage resulted; in one, however, owing to the carelessness of the nurse. The advocates for long incisions, object to punctures, to small incisions, and to leeches, that they do not fulfil a very important indication; namely, the removal of ten-

sion. For the mere purpose of detracting blood, we should suppose that leeches were to be preferred, indeed we have always found them effectual, but where it is important to remove tension promptly, we should not hesitate to resort to extensive incisions, notwithstanding the clamour that has been raised against the practice, as we believe ill consequences may be guarded against. The objections to them are, we think, not sound. Fatal hæmorrhage has resulted from leech bites, and fatal salivation from a small dose of calomel given as a purge, and yet no practitioner will be willing to abandon these remedies.

52. *On the Treatment of Amenorrhœa and Leucorrhœa.*—"The July number of the *Revue Medicale* contains two short but instructive papers on the subject of amenorrhœa and its concomitants, particularly leucorrhœa. The author of one of them, M. Moulin, considers chiefly the form of the disease which attacks robust, plethoric females, and which is characterized by the cessation of the discharge being speedily followed by a febrile state of the pulse, and symptoms indicating a determination of blood to one or other of the great cavities, if not actual inflammation of one of the viscera. In such cases it has long been the custom to use the lancet, and M. Moulin has given some excellent examples of the efficacy of such treatment. He states that when blood was drawn on the day before that on which the flow of the catamenia, but for the suppression, would have begun, he has found it reinstated almost invariably, and sometimes the restoration took place while the blood was flowing from the arm. When leucorrhœa accompanied such cases, it ceased at once after the bleeding if the menstrual discharge was restored. M. Guibert, the author of the other paper, after a few observations, in which he concurs with M. Moulin as to the advantage and peculiar effects of blood-letting in the amenorrhœa of robust plethoric people, proceeds to notice the chief emmenagogues which he has found useful in the other variety, the amenorrhœa, namely, of females of a feeble, nervous, and lymphatic temperament. Of all the substances he has tried none have appeared to him to be so steadily successful as Venice turpentine. The form in which he uses it is that of pill, compounded of two parts of turpentine, three of Castile soap, and the necessary quantity of liquorice-root powder, each pill containing four grains, and ten being the daily dose. Even in inveterate cases he has seldom been obliged to continue the treatment above twelve days.—*Ed. Med. and Surg. Journ. Jan* 1828.

53. *Epilepsy cured by the Physiological Treatment.* By Dr. Tetu.—A girl, aged twelve years, of nervous temperament and of unusual intelligence, had been subject for five years to epilepsy. The attacks at first were not very frequent, once or twice a week, but at the period when she was seen by Dr. Têtu, she had four or five a day. The whole arsenal of medicine had been exhausted by the physicians who had treated her, but without affording any relief; on the contrary, she became worse and worse. When Dr. T. was consulted, he found her much emaciated, pale, her abdomen hard and distended, epigastrium tender, bowels obstinately constipated, pain in the head; she was listless, petulant; eyes haggard, pupils dilated, slight strabismus; intelligence diminished, and her memory, which had been wonderful, almost gone. Dr. T. treated her with enemata; leeches to the epigastrium, head and neck; mucilaginous drinks; rigid diet; ice to the head; sinapisms and blisters to the extremities; pediluvia, &c. By these means she was entirely cured. Dr. T. attributed the disease to the immoderate use of emetics, purgatives, and anthelmintics, and to the parents having misused the precocious intelligence of their child, whom they took great pleasure in showing as a great prodigy.—*Ann. de la Med. Phys. March,* 1828.

Two cases of epilepsy cured by antiphlogistics and revulsives, are related in the twelfth volume of the same Journal, and two others are given by Dr. Jackson in the fourteenth volume of our preceding series.

54. *Treatment of Angina Maligna.* By Dr. Bianquin.—Angina maligna has prevailed for several years as an epidemic, at Saint Ouen, arrondissement de Mortagne, in France. It commences generally with a swelling of one tonsil, sometimes both, which ulcerate in two, three, or four hours—the uvula and palatine arches are quickly affected, and all the neighbouring parts become gangrenous. There is little fever at the commencement; deglutition is not very painful, but by the third day it is impossible, liquids returning by the nose; and the patient dies on the fourth or fifth day, when the angina is violent or ill treated. It attacks in general the young, especially those between the ages of five and twenty-five years. The treatment that Dr. Bianquin has found almost always successful, when employed early enough, is bleeding from the arm several times in one day, and even repeated on the following one; emetics after two or three bleedings have been premised, are also useful. The principal remedy, however, is venesection, which Dr. B. employs to a very great extent. He has not found any advantage from leeches. He employs general remedies and counter-irritants, as external applications and gargles; stimulating pediluviæ, sinapisms, &c. Of upwards of three hundred patients treated by these means during the last four or five years, he has lost only fourteen.—*Annales de la Médecine Physiologique, March*, 1828.

55. *Phthisis Pulmonalis.*—Dr. Giraudy recommends that phthisical patients should be kept in an atmosphere rendered moist and warm by the vapour of water, and the temperature of which should be preserved uniform. He proposes by this mean to calm the irritation of the pulmonary mucous membrane, and he adduces some cases in support of the practice.—*Revue Médicale, October*, 1827.

56. *Treatment of Acute Hydrocephalus.* By Thomas Mills, M. D.—"As hydrocephalus in the first stage is accompanied by an inflammatory action of the vessels of the brain, it is clear that it demands the employment of anti-inflammatory remedies. Of these remedies the most important are, blood-letting, cathartics, antimonials, and calomel combined with opium; and these are named according to the order in which they prove most useful. We have, moreover, some auxiliary medicines of considerable value, as the tepid bath, blisters, fomentations, sudorifics, pediluvium, &c.

"In a disease of so dangerous a tendency, it is scarcely necessary to state that the loss of a day, perhaps of an hour, may be followed by fatal consequences. The temporal artery, the jugular vein, or a vein in the arm, should be opened, and the blood allowed to flow until some impression is made on the general habit, and until the morbid actions of the vascular system of the brain are modified or totally changed. That such an effect has taken place may be known by a paleness of the countenance, a shrinking of the features, and a tendency to deliquium; or by a diminution or removal of the heat, pain, weight, or uneasiness of the head. As soon as this is produced, our object for the time is accomplished, and the orifice should be closed. Immediately after, or even previous to venesection, brisk cathartics should be administered and repeated at short intervals; and these I recommend not merely from their emptying the bowels of their contents, but because they act on the exhalents of the entire alimentary canal. Thus we lower the tone of the heart and cerebral vessels, and promote a more equal distribution of the blood.

"Remissions and exacerbations daily take place in this disorder; they occur at irregular periods; most commonly the remission is observed during the morning, and the exacerbation in the evening; but at whatsoever time the exacerbation may return, let it never be forgotten that blood is again to be detracted, and active cathartics are to be again exhibited, until some impression is made on the disease. By these measures, promptly and judiciously executed, there is reason to hope that in the course of three or four days the excitement of the brain will be considerably abated, or perhaps removed.

"I have mentioned that blood may be abstracted from the temporal artery, the jugular, or from a brachial vein, but it sometimes happens that blood cannot be taken from any of these vessels; in that case our chief dependence is on cupping, or what I generally prefer to it, the application of leeches to the temples, the vertex, and occiput, or behind the ears; they should be applied in large numbers, and the flow of blood encouraged until the morbid actions in the brain are arrested or removed; and we may infer that some impression has been made on the complaint if we find a tendency to deliquium, a weakness or fluttering of the pulse, and a shrinking of the features, symptoms often observed to follow the application of leeches, and which show the power of local blood-letting over the action of the heart and arteries. The same method of depletion should be had recourse to on every return of excitement.

"Nor do I mean to limit the employment of leeches to those cases only where blood cannot be abstracted by the lancet. My opinion on this point may be collected from a view of the cases detailed, in which leeches were generally used immediately after venesection, in order to postpone the period of exacerbation, or break the chain of diseased action. I was led to adopt this plan of treatment from observing that these two modes of drawing blood, when successively employed, made a greater impression on the disease than either of them when singly had recourse to.

"As soon as a check has thus been given to the disorder of the head by the action of these several remedies, some benefit is to be expected from the judicious administration of calomel with opium. The good effects of a combination of these remedies seem to depend on their power of equalizing the circulation, increasing the secretions, and exciting the actions of the cutaneous vessels, in consequence of which the congestion of blood in the brain, or in any other organ, is diminished or removed. The dose must be regulated by its effect, the constitution of the patient, and the violence of the attack. Although, generally speaking, it is difficult to induce ptyalism in this complaint, yet as calomel in some cases unexpectedly attacks the salivary glands, and produces ulceration and mortification of the fauces, I prefer giving it at first in small quantity, which may be increased at pleasure. In acting thus cautiously we avoid the painful consequences sometimes observed to follow its exhibition.

"The efficacy of opium, united with calomel, depends in some measure on its checking the tendency of the latter to run off by the bowels or salivary glands; so combined, it often procures tranquil rest, determines to the surface, and allays that painful irritation of the nervous system, and of the mind and body, which so uniformly accompanies this disease. I cannot bring to my recollection a single instance in which this remedy, when judiciously exhibited after depletion, was followed by disagreeable consequences; and in cases unaccompanied by great irritability of the stomach, its powers are occasionally increased by the addition of small quantities of ipecacuanha, or antimonial powder.

"While speaking of opium I beg leave particularly to recommend to the consideration of the practitioner the 'watery extract,' a preparation which procures rest, diminishes pain and irritation, and diffuses throughout the frame an agreeable sensation; at the same time it is devoid of any narcotic or nauseating quality, and does not cause vertigo, pain, or a sense of fullness in the head, symptoms so often observed to follow the exhibition of the thebaic extract, or the common tincture.

"Among the auxiliary remedies, the tepid bath holds the first place; its use is often attended with manifest advantage; indeed in some instances the benefit resulting from its employment is as unexpected as it is extraordinary; I have seen it at one time reduce the intense heat and dryness of the skin, at another produce a genial warmth and moisture of the surface, and thus allay irritation, diminish the action of the heart and arteries, and check for a while the violence of the disorder. The tepid bath will prove most serviceable after the employment of blood-letting and cathartics; it should be used twice or thrice daily, according to the urgency of the symptoms, and the effect produced. The period of immersion is from fifteen to forty minutes, about an hour before which the patient should take a dose of calomel and opium, and while in the bath small repeated draughts of tepid whey or barley-water, in which is dissolved tartrate of antimony,* in doses so minute as not to excite nausea or vomiting; and during this period friction must be constantly applied to the body and extremities with the hand or a soft brush. Blisters are never to be employed previously to depletion, or while there is a high degree of excitement, for under such circumstances, by their stimulating powers, they rather tend to aggravate than diminish the disease. On some occasions they are useful when applied to the head or its vicinity, chiefly on the principle of counter-irritation, and partly by the fluid abstracted from the cutaneous vessels, whereby the congestion of the interior is in some measure diminished. Blisters sometimes afford relief when applied between the shoulders, or along the spine, owing in a great degree to the connexion of the spinal marrow with the brain, and instances occasionally occur where evident advantage proceeds from their application to the extremities. Now, as in these cases I have observed perspiration to follow their employment, the benefit hence resulting seems to me to proceed from their action on the vessels of the surface, and the power they thus possess of restoring the equilibrium of the circulation.

"Here I should not omit to suggest to the faculty the use of the antimonial ointment; the happiest effects occasionally arise from its application to the vertex or occiput, especially in cases which supervene to repelled scabies of the hairy scalp; it is quick in its operation, and produces a pustular eruption similar to the scabies; this is often attended with a copious discharge of puriform matter, which is followed in some instances by almost instantaneous relief of the painful and alarming affection of the head.

"I have made no mention of a remedy much extolled by some practitioners, I mean a caustic issue established in the vertex, for I never witnessed any benefit to result from its employment in acute hydrocephalus, nor indeed is it reasonable to expect that in a disease which often runs its course in a few days, benefit can be derived from a remedy which requires the same or a longer period before it takes effect."—*Transactions of the King and Queen's College of Physicians in Ireland, Vol. V.*

57. *Treatment of Chronic Hydrocephalus.* By Thomas Mills, M. D.—"Acute hydrocephalus is distinguished by a high degree of arterial excitement; the chronic form by venous turgescence of the brain, an imperfect development of disease, and an unequal distribution of the blood; but as in both forms several modifications and varieties may be traced, due regard must be paid to the peculiarities of every case, as these must necessarily require some modification of the mode of treatment; still, however, the curative process is to be governed by the same general principles, and the same means are to be employed, regulated by the urgency of the symptoms, and the age and constitution of the patient. Blood-letting, general and topical, cathartics, mercurials, opiates, &c. are the principal means to be employed in chronic as well as in acute hydrocephalus; but as in the latter the danger is more imminent from the high degree of excitement with which it is usually accompanied, the most efficient remedies are to be employed with promptitude and decision. In the chronic, on the contrary, the disease is slower in its progress and development; and as the

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* Since this paper was written, (1821,) I have given tartar emetic more frequently, and in larger quantity than formerly, and with decided benefit, especially in the acute form of the complaint. This active agent possesses in many instances the power of diminishing the tone and activity of the vessels of the brain and heart, and thus of breaking the chain of diseased action. This appears from its effects: a sinking of the pulse, collapse of the features, tendency to deliquium, accompanied by cold perspiration, and a diminution of the head-ache, and throbbing of the temples. I was induced to make a trial of this remedy in hydrocephalus from witnessing its good effects in maniacal delirium and other disorders of the brain, arising from a high degree of vascular excitement. The dose varies from one-fourth of a grain to two, four, five, or even ten grains, dissolved in water, to which may advantageously be added, when the stomach is irritable, small doses of the tincture of opium.

symptoms are less urgent, measures of a milder nature are commonly required; I say commonly required, because cases of chronic hydrocephalus occasionally arise in which the system is so overpowered by the venous turgescence of the brain, that, to save the life of the patient, recourse must be had to the most decidedly active measures.

"I shall only further remark, with regard to the treatment of chronic hydrocephalus, that permanent benefit is to be expected from the early establishment of a drain in the vertex or its neighbourhood, and that mercury should be administered more largely, but opium more sparingly than in the acute form."—*Ibid.*

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58. *Treatment of Venereal Cases at the Val de Grâce.*—During the height of the symptoms the diet consists of light meagre broths, milk, prunes, cooked fruit, and eggs; on the subsidence of the disease, a small portion of bread is given, which is gradually augmented in quantity. The drink consists of different emollient and refreshing tisanes. If a cure takes place, beer and even wine is allowed. The patients are confined to bed in order to keep up perspiration, and are only allowed to leave it when they take a warm bath, which is every four or five days. If the symptoms continue, or if they are secondary, the simple sudorific syrup or the tisane of Feltz is used, but without the addition of mercury.

Under the effects of such a regimen, venereal symptoms rapidly disappear, but it should be persevered in for some time for fear of a relapse. Local emollient lotions are used at first, and afterwards astringent. When the inflammation of the prepuce is violent, local bleedings appear to be dangerous. If the chancres are painful, leeches are to be applied to their surface several times, and they are to be bathed with a watery solution of opium. Buboes are treated by constant leeching, and poultices are never applied to them; but they may be fomented with emollient washes. If they suppurate, an issue is given to the pus by several small openings, which are kept open. Urethrites and orchidites are also treated by emollients and capillary bleedings. Astringent injections and the balsam of copaiba are never used until all inflammatory symptoms have been subdued. In old cases opium is given internally. Vegetations about the anus and on the prepuce are treated by applications of leeches in cases of high inflammation, and afterwards by lotions, with gummy extract of opium; such a plan generally precludes the necessity of recurring to excision. Eruptions yield to the same treatment. In ulcerations of the throat and soft palate, general and local bleedings are used; to effect the last a thread is passed through the tail of the leeches which are then placed in a glass tube, and introduced to the diseased spot.—*Annales de la Médecine Physiologique, January,* 1828, *from the Journ. Universel des Sciences Med. Oct.* 1827.

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59. *Iodine in Gout.*—M. Gendrin has announced to the Royal Academy of Medicine, that for some years past he has successfully employed the iodine in gout, and that it produces an absorption of the arthritic concretions, and prevents the return of the paroxysm. Seven cases of the disease in its acute and chronic form, were mentioned as having been cured in this manner.—*Journal de Chimie Médicale.*

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60. *Deafness cured by Electricity.*—A girl, æt. eight years, who had lost the faculty of speech and hearing four years previously, was subjected about twenty times during four months to the action of an electrical machine. The fluid was employed in a variety of ways, sometimes by means of electric baths, sometimes by sparks, and at others by shocks directed as nearly as possible to the affected organs. At the expiration of the above-mentioned period, a great improvement was perceptible; the patient, who previously could not hear the report of a pistol discharged by her side, is now able to understand conversation carried on in a moderate tone.—*Journal des Progrès, Vol. VIII. from Rust's Magazin, t. xxv.*

OPHTHALMOLOGY.

61. *Case of Periodical Blindness, from a cause not hitherto observed.* By **Charles Bell**, Esq.—A lady, æt. twenty-four; delicate frame; great intelligence and expression; accomplished and studious; was in the habit of drawing a great deal, and had painted a miniature a short time before the symptoms now to be described.

In August, 1826, she began to have head-aches of an uncommon character; the pain extended down the side of her face to the angle of the jaw, and then backwards into the ear, with a sensation of tightness in the skin of the forehead; and this pain was experienced first on one and then on the other side of the face. These pains appeared to her physician to be connected with considerable disorder of her stomach and alimentary canal, increased, if not produced, by too sedentary a habit, and application to drawing. After a dose of calomel and opium, she took in succession, the sulphate of quinine, the extract of henbane, and the liquor arsenicalis. She took also the blue pill till her mouth became sore.

The pain ceased, and a "heavy stupidness" prevailed for a few days, when one day in reading, she found she could not see the letters—they were thrown together and confounded. This obscurity of vision was attended with a fluttering in the eyes, which seemed to her alternately to open and shut with great rapidity: by turning away from her book, and attending to other things, she could read for some time when she again looked upon the page. The application of leeches relieved these symptoms for a day or two; but the relief was temporary, and she gradually lost the power of directing her eyes. From the beginning of this affection of the eyes, the pain ceased in the head. This actual blindness came on periodically. It began about ten o'clock in the morning, and ceased about four; and, during the blindness, there was constantly presented a quick motion of the eyelids and eyeballs; and, during the whole of these attacks, she lost all control over the muscles of the eyelids and eyeballs. She could distinguish light from darkness; her vision was occasionally restored. Her medical attendant believing these symptoms to be connected with nervous irritability, tried galvanism, and, almost on the first shock which was given across the eyes, she could find her way out of the room, and distinguish colours; but the remedy after this produced no benefit, and she even lost that degree of vision which she had enjoyed in the morning and evening.

When Mr. Bell saw the patient her eyelids were dropped over the eye, but not with the character of paralysis: they were in continual motion while she spoke, being raised and depressed for about the twelfth of an inch, and never so far raised as to expose the pupils; the eyebrows were raised by an ineffectual attempt to open the eyelids. She could close the eyes and wink, powerfully compressing them. The secretion of tears flowed plentifully. There was not the slightest degree of inflammation in the eyes. The concealment of the pupil was not altogether owing to the dropping of the eyelids, but to the eyeballs being at the same time rolled upwards: she has an equal inability of raising the eyelids, and of depressing the eyeballs. The eyelids being stretched over the eyeball, and her face directed to the window, she saw a bright yellow light, showing that the defect of vision was not in the retina; moreover, on the lid being forcibly raised, so as to disclose a small portion of the pupil, the patient could see. It was not therefore any morbid insensibility of the pupil which rendered this young lady blind, but the fact that she cannot even for a moment direct her eye to the object. She has a pain extending round the head as if it were bound by a hoop; this is not continual, but is excited by the motion of a carriage or by noise. She has also a whizzing in her ears.

Mr. Bell expressed it as his opinion, that this was an instance of that irregular muscular action which depends on some remote irritation, and not referrible to organic disease, either of the brain or nerves, and that he saw no reason why we should not hope for sudden restoration of sight.

Mr. Bell's first idea was to excite the viscera of the abdomen by emetics, and to follow those up by opiates. During the operation of the first emetic her eyes opened, and she saw for a short time. On the second operation her eyes remained open for ten minutes. The opiates being then administered, on the first morning when she awoke she saw perfectly, but after a short interval she was again blind. On the third of January she saw during all the time of breakfast, and played a new song from the book. During Mr. B.'s visit, whilst he was writing a prescription, she called to him to look at her, and to his surprise he perceived that her eyes were open, and steadily fixed on him, and her whole countenance was improved. Her sight continued perfect whilst Mr. Bell remained in the house.

It is not said whether the cure remained permanent.—*London Medical Gazette, Vol. I. No. 5.*

62. *Examination of the Eyes of a person affected with Amaurosis.*—Professor **Heusinger** found, on examining the eyes of a person affected with amaurosis, that both optic nerves were in a state of atrophy, and that the eyes were well formed, and presented the natural consistence. On puncturing the sclerotica, which was done with care, a considerable quantity of a yellow-coloured humour escaped; it communicated a yellow tint to the water, and coagulated on the addition of alcohol. The choroid and retina were natural; the vitreous humour had completely disappeared; the lens was yellow and opaque. The most remarkable part of the examination was the discovery of three transparent vesicles, of a pyriform shape and the size of a pea, adhering to the outer surface of the retina. These contained a fluid similar to that which escaped on opening the sclerotica, and M. H. thinks that the fluid which first escaped, was contained in similar vesicles. According to M. H. they were formed by Jacob's membrane. Both eyes presented exactly the same appearance.—*Heusinger's Zeitschrift für die Physik, tom. I.*

63. *Treatment of Stricture of the Lachrymal Duct.*—The instruments employed by M. **Dupuytren** in the operation for the cure of this affection, "are a common French bistoury, a canula of silver, gold, or platina, and a *porte-canule*, to which the canula is affixed for being more conveniently inserted in the lachrymal passage. The length of the canula is one inch; its upper opening measures one-tenth of an inch; the tube gradually tapers from its upper to its lower opening, the diameter of which measures one-twentieth of an inch; the lower opening is placed obliquely, and the upper opening is surrounded by a small rim to prevent its sinking too low into the duct."

The operation is performed as follows. "The patient being seated in a chair, rests the head against the breast of an assistant, who fixes the head by a hand placed over the ear and temple on each side. The operator, (supposing the left eye to be operated upon,) stands in front of the patient, and a little to the left side. With the index finger of the left hand he puts the integuments at the inner angle of the eye upon the stretch, for the purpose of rendering the tendon of the *orbicularis palpebrarum* more evident, at the same time that the assistant who holds the head, stretches the integuments at the outer angle of the eye. The lachrymal sac is then to be punctured by the point of the bistoury being inserted immediately below the tendon of the *orbicularis palpebrarum*. The direction in which the instrument should be inserted is nearly vertical, the handle inclining slightly to the opposite side, and a little forwards, on account of the projection of the eyebrow, the edge of the blade being directed obliquely downwards, or towards a point situated midway between the angle of the mouth and the pinna of the ear, this being the direction which admits of the bistoury being insinuated to the greatest extent down the lachrymal canal. The puncture being made, the bistoury is allowed to remain as a director, and the operator taking in the left hand the porte-canule armed with the canula, gently insinuates the tube along the side of the bistoury into the lachrymal canal; the bistoury is then withdrawn; slight pressure is made upon the upper part of the canula, so as to cause it to be completely imbedded in the canal. The operation now being completed, the patient is directed to blow down the nose at the time that pressure is made upon the nostrils, by which the tube is freed from any blood that may have accumulated in it, and the air issues out at the incision, showing the free communication that is established between the nostril and the sac."—*Edinburgh Med. and Surg. Journ. Jan.* 1828.

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64. *Treatment of slough of the Cornea.*—As an external remedy in this dangerous state of the eye, Mr. Ryall says that there is none so grateful, or withal so efficacious for throwing off the morbid parts, as a solution of the nitrate of silver, in the proportion of eight grains to the ounce of distilled water, briskly injected against the slough three or four times a-day. But to obviate and arrest the progress of this serious termination of disease, he observes, we must rest our chief reliance on the extract of cinchona, so justly praised by the late Mr. Saunders. Opportunities, he says, are afforded him but too frequently, of giving this medicine a fair trial, in the cases of young infants, born for the most part in the Lying-in Hospital, and he asserts, that greatly as he had been prepossessed in its favour, it far exceeded his expectations, since both shape and function were preserved, to an extent he dared not to hope for, in several instances where death of the exterior lamina of the cornea, or of a segment of its entire thickness, had already taken place, and when the eye had presented the appearance of a disorganized mass. Mr. R. has also lately used the sulphate of quinine with manifest advantage.—*Transactions of King and Queen's College of Physicians in Ireland, Vol. V.*

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65. *Treatment of Pustular Ophthalmia.*—Should considerable inflammation exist, Mr. Ryall recommends leeches and purgatives, but the ulcerative process of the pustules will be restrained, and in most cases speedily removed, he very correctly observes, by a few light touches of a strong solution of the nitrate of silver. Advantage will also be derived from the application of a dilute ointment of the nitrate or super-nitrate of mercury every night to the pustules.—*Ibid.*

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66. *On Porriginous Ophthalmia.* By Thomas Christian, Consulting Surgeon to the Liverpool Ophthalmic Infirmary.—Inflammation of the eye is a very common complaint in children of a scrofulous diathesis, and is also a frequent coincident with eruptive diseases. Sometimes it occurs, and often alternates, with eruptions of the scalp and discharges behind the ears, and when thus appearing has then been termed by Mr. Wardrop exanthematous ophthalmia. It frequently also presents itself in concurrence with porrigo larvalis and porrigo favosa of the face and head, and to this combination Mr. Christian has given the name of porriginous ophthalmia. This, says Mr. C. is a disease of early life, affecting principally children, though sometimes seen in the adult subject. It is usually accompanied by an eruption of pustules on the face or head, which go through the various stages of suppuration, ulceration, and desquamation: and if the eruption in its pustular form shall have disappeared before the inflammation of the eyes have commenced, still there will almost always be found some traces of the original disease, in the form either of scabs or fissures, situated behind the ears, at the commissures of the palpebræ, or at the junction of the alæ nasi with the cheeks. It is worthy of remark, that when the fissure or chap is situated between the lips, attended with excoriation of the nostrils, the upper lip often swells, assuming the appearance of what is vulgarly termed the scrofulous lip, which may be one cause of the disease being referred to this origin."

The symptoms of the disease are similar to those of scrofulous ophthalmia as usually described. Mr. C. attributes the inflammation of the eyes to the porriginous virus being conveyed from the eruption or pustules to the eyes by means of the fingers. In the treatment of this complaint, Mr. C. says that bleeding, either topical or general, is seldom necessary, except the inflammation has extended to the internal tunics of the eye: blisters are useless, and cooling and sedative lotions unavailing. In fact, he believes the inflammation to be a specific one, and that "the object to be kept in view in the treatment of this particular affection, is not so much the alleviation of pain and irritation, as the production of a new action in parts already under the influence of a specific disease." We cannot coincide with our author in this opinion, but as the remedies which he recommends are those which he says have been found by an extensive experience to be useful, we shall furnish our readers with an account of them. The best remedies, he says, are the mercurial ones. "A weak solution of the oxymuriate of mercury, composed of one quarter of a grain to the ounce of water, forms a very useful application: or if there be much discharge from the eyelids, and especially if accompanied by excoriation of the parts around the eye, the mixture of calomel and lime water, known by the name of black wash, will be found to be one of the best local remedies. The unguentum hydrargyri nitratis mitius, or the unguentum hydrargyri præcipitati albi, affords an excellent dressing for the eruption, or ulcers about the face and ears, which require to be attended to; a small portion of the former, or the red precipitate ointment diluted, is to be introduced within the palpebræ at bed-time. Previously, however, to the use of these latter means, a weak solution of the argentum nitratum, in the proportion of two grains to the ounce of distilled water, should be dropt on the surface of the globe, and this ought to be repeated every second day, as long as the ulcers continue. It has already been remarked, that the morbid action has been kept up, in the fine textures of the eye by the presence of an ulcer, or fissure at the corner of the eyelids, which will be frequently observed to bleed, whenever the palpebræ are forcibly separated. These fissures must be touched, every second day, with a saturated solution of the nitrate of silver; and during the intermediate days, with the weak ointment of nitrate of mercury."

The vascularity, he adds, together with the irritability, will generally disappear with the healing of the ulcers; but should a degree of morbid sensibility still remain, a collyrium, consisting of four grains of the sulphate of zinc to an equal number of ounces of water, combined with a drachm of the vinum opii, dropped into the eye once or twice a day, will be found highly useful.—*Glasgow Medical Journal, February*, 1828.

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67. *Strumous Corneitis and Iritis.*—Mr. Guthrie describes in the *Edinburgh Medical and Surgical Journal*, for April last, an ophthalmia, to which he has given this designation, and which occurs most frequently in girls of a strumous habit, about the age of fourteen, in whom the menses have not appeared. He describes the inflammation as "slow and insidious in its progress, marked by a very slight redness of the conjunctiva, and the greatest possible degree of intolerance. The vessels on the sclerotica are seen on close inspection very minutely injected, and running in straight lines to the margin of the cornea, where they form the well-known appearance of a vascular zone. The cornea soon becomes opaque; the iris contracted; and the aqueous humour muddy. A profuse gush of scalding tears follows the opening of the eye. Though the sensibility is morbidly increased, the patient rarely complains of pain either in the eye or head, the aversion to light being the principal distress.

"The constitutional symptoms run very high; the pulse becomes quick; the appetite is lost; and the bowels constipated or otherwise deranged; skin harsh and dry; and the whole system in a high state of irritation."

The inflammation has its seat principally in the cornea and iris, both of which are affected simultaneously; when the disease is not controlled, the other textures ultimately become affected.

The disease is extremely obstinate, running a course of from two to three months, yet, when well managed, rarely produces permanent injury to vision. The cornea, though apparently disorganized, resumes its transparency, and the iris its functions, under the influence of those remedies which subdue the inflammation and photophobia. But when allowed to run on uncontrolled, it terminates in coadhesion of the iris and cornea; constricted pupil; opaque capsule, with partial adhesion thereto of the pupillary margin of the iris. If the anterior chamber is preserved, a leucomatous state of the cornea is a frequent result.

The mild, indolent character of the disease, renders it more difficult to subdue, than if more active; and the practitioner is insensibly betrayed into irresolution by the seeming inertness of the disease, and the obvious delicacy of the patient. In this kind of ophthalmia, Mr. G. has never found the detraction of blood either local or general of any avail. The principle of treatment indicated in such cases is, he says, to lessen the irritability of the system, without materially depressing its power. To effect this object, he recommends, as most effectual, emetics, which should be repeated every second or third day for the first week. At the same time ten or twelve grains of Dover's powder should be administered every night, and followed up by a small dose of sulphate of magnesia the next morning. This treatment, he says, will soon give a turn to the inflammation, and reduce the morbid irritability. This being accomplished, mercury must be had recourse to, and introduced into the system, so as to disturb it in the least possible degree. Profuse salivation is not wanted. Its effects are often very decisive long before the gums become affected. Mercury in this disease is a remedy of great value, and will seldom disappoint us, if not too early employed. Blisters he considers as not useful.

Next in importance to mercury he ranks belladonna; without it, he says, the case could not be brought to a favourable termination. The extract should be thickly painted on the eyebrow and eyelid every night at bed time. Besides its influence over the pupil, which is very limited for some time, it has a considerable effect in allaying the local irritability.

Stimulating drops and ointments must be discarded altogether during the acute stage, as well as every other doubtful remedy. The only local application from which Mr. G. has seen any benefit is the steam of warm water containing laudanum. From this the patient generally derives great relief.

When the inflammation has been considerably reduced, and the intolerance of light removed, a little weak precipitate ointment introduced into the eyes twice a week will be of great service in restoring the cornea to transparency. Solutions of nitrate of silver, or muriate of mercury, or *vinum opii* may be occasionally interposed.

In the convalescent state, tonics and sea air are required to complete the cure and re-establish the health. Should the disease lapse into a chronic form, a termination which Mr. G. has occasionally seen, caustic issues superadded to the local treatment will be found successful.

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68. *Singular defect of Vision.*—"Mr. Airy, of Cambridge, discovered a few years ago that he did not usually make use of the left eye in reading, and that it was entirely useless on looking at any near object. This he at first attributed merely to habit, and thinking that it might be corrected by calling the left eye into use, he endeavoured to read with the right eye shaded, but found that he could not distinguished a single letter, at least of small print, at whatever distance he placed the book. Some time after, Mr. Airy perceived that the image made in the left eye by a bright point, as a star, or distant lamp, was not circular, but elliptical, the major axis making an angle of about 35°, with the vertical and the upper extremity being inclined to the right. With concave spectacles, (through which distant objects were distinct to the right eye,) Mr. Airy found that, to the left eye, a bright object, as those above-mentioned, had the

appearance of a well-defined line, corresponding to the major axis of the ellipse seen by the same eye unassisted. He also found that if he drew two lines crossing each other at right angles, and placed the paper in a certain position, and at a proper distance, one line appeared perfectly distinct, while the other was scarcely to be seen. On bringing the paper nearer to the eye, the fact with regard to the lines was reversed, the distinct becoming indistinct, and vice versa. 'All these circumstances indicated that the refraction of the eye was greater in its plane nearly vertical, than in that at right angles to it, and that, consequently it would not be possible to see distinctly by the assistance of lenses with spherical surfaces.' Mr. Airy's object then was to construct a lens capable of refracting the rays in a certain point more powerfully than those in the plane at right angles to it; and after various ineffectual attempts, his purpose was effected by a person name Fuller, at Ipswich. One surface of the glass is cylindrical, the other spherical; both are concave. Vision is most perfect when the cylindrical surface is turned from the eye; and Mr. Airy can thus read the smallest print with the left eye as well as with the right, and may thus be said to have recovered the use of an organ, which, but for his own ingenuity, would have been permanently lost."—*London Medical Gazette, Vol. I. No. V.*

SURGERY.

69. *Congenital lateral depression of the Chest.*—M. Dupuytren describes in the fifth volume of the *Répertoire d'Anatomie*, a congenital deformity of the chest, which he says has frequently come under his notice. This deformity consists in a depression of the sides of the chest, a proportional projection of the sternum and abdomen anteriorly, and the vertebral column posteriorly. In children of scrofulous and other cachectic constitutions, affected with this deformity, the sternum projects like a keel; the vertebral column presents quite a lump, whilst the sides are not only flattened, but depressed. This deformity exists to such a degree sometimes, that the two sides of the chest may be embraced with the fingers of one hand. The transverse diameter of the chest is thus considerably diminished, whilst the antero-posterior is enlarged. The function of the organs contained in the chest become impaired, manifested by oppression and catching of the voice, and great anxiety. These symptoms are greatly increased on taking the slightest exercise, just as in cases of diseases of the heart, for which complaint this affection is sometimes taken. During sleep, respiration, impeded by the malformation of the chest, and swelling of the tonsils, is performed with the mouth open, and attended with considerable noise. Sleep is frequently disturbed with painful dreams, and is often interrupted by cries and starts. These symptoms may exist to such a degree as to prevent the development of the vital functions, and produce death at the time of birth. If death does not take place so soon, nutrition will be disturbed, and the children become emaciated. New-born children experience great difficulty in sucking. The deformity is generally accompanied with a considerable swelling of the tonsils, which adds to the difficulty of respiration, and in some cases so much, that M. D. has been obliged to remove a portion of the tonsils. Pulmonary catarrh is also a frequent complication of this malformation, but the most dangerous of all the complaints which supervene on it, is croup.

In the treatment of this affection, M. D. recommends a generous diet, and as much exercise as the patient can endure without producing difficulty of respiration. To these must be added local means, the most efficient of which, he considers to be those which strengthen the extensor muscles of the arm and shoulder, and also pressure on the fore part of the sternum. The kind of exercise recommended by M. D. is the lifting of a weight for many hours a-day. The weight is to be suspended to a rope that passes through two pulleys; the extremity of the rope that is to be laid hold of, ought to be attached to the middle of a lever which is seized by the two hands, whilst the other extremity supports a weight proportioned to the strength of the individual about to raise it. The person standing upright, and even raising himself on his toes to reach the lever, placed at the extremity of the rope, seizes it with both hands, and thus employing the muscles of the forearms, the arms, the neck, and the chest, to bind at the same time the head, the chest, and the body, and to incline them towards the ground, he raises the weight suspended at the other extremity of the rope, and employs alternately the flexors to raise the weight, and the extensors to balance the body. To this kind of exercise must be added pressure on the chest, which should be effected by placing the back of the child against a wall, and pressing against the sternum with the palm of the hand as often, and with as great a degree of force as the strength of the person admits of. This pressure ought to be used ten, or even a hundred times a day, if possible, and its efficacy is proportioned to the continuance of the pressure, and its frequent repetition. By the above means of treatment, M. D. has been enabled to cure patients before supposed to be incurable.

70. *New method of treating Aneurisms of the Ascending or Descending Aorta.*—M. Larrey has communicated to the Royal Academy of France a new method of treating this formidable affection. It is that of Valsalva, conjointly with the constant application of ice to the tumour. The following case, among others, is stated to have been cured by this method. A soldier suffered in consequence of a wound from a varicose aneurism of the crural artery. The size of the tumour exceeded that of the fist. Every operation was impracticable, and the patient was expected soon to die. However, he was subjected to Valsalva's method, (low regimen, rest, and frequent bleedings carried to marasmus,) and the application of ice, and then several moxas. In the space of a few months the tumour was considerably reduced. It was also judged from different signs, that its walls were thickened in proportion to the reduction of its volume. Finally, a complete obliteration of the crural artery took place, and the patient was cured in less than a year.—*Bulletin des Sciences Médicales, December,* 1827.

71. *New method of treating Ranula.*—M. Dupuytren thinks, that the best mode of radically curing ranula is to keep the aperture, made in the tumour, constantly open, by means of a foreign body introduced and kept in the cyst, on the same principle as in the operation for fistula lachrymalis. To effect this object he uses a small cylinder three lines long, and from one line to one and a half lines in breadth, and terminated at each extremity by a small elliptical plate, slightly convex on its free surface, and concave on the surface that adheres to the cylinder; one of these plates is placed inside the sac, and the other should correspond to it externally, that is to say, in the cavity of the mouth. This instrument may be made of silver or platina, the latter is the best. M. Dupuytren has been uniformly successful with this instrument. If the tumour is very large, or if its parietes be thick, it will be convenient, before applying the instrument, to make a large opening into the sac, sometimes even to excise a portion of it, and not to pass the instrument until the wound has almost cicatrized. *Répertoire Genéral d'Anatomie, tom. 5.*

72. *Amputation of the Thigh during the progress of Gangrenous Inflammation.*—George Macdermott, Esq. relates in the *Edinburgh Medical and Surgical Journal,* for April, 1828, the case of a soldier, æt. twenty-two, of sober habits and generally healthy, who suffered a compound fracture of the leg, produced by a fall from a considerable height. The usual treatment was pursued, and no very unfavourable symptoms took place until the fifth day, when the leg became much swelled, œdematous, and of a deadly pale colour, and he complained of a burning heat in the instep. On the morning of the sixth day the fore part of the leg from the knee to the instep was in a state of gangrene; and close to the fracture, the integuments, cellular membrane, and superficial muscles,

were completely sphacelated. The disease was rapidly advancing, and had already reached half way up the thigh—his constitution fast sinking under it—his stomach irritable—his countenance sunk and alarmed in its expression—his pulse low, frequent, and weak.

Under these circumstances, Mr. Macdermott thought that the vigour of his constitution seemed to afford the only chance of saving his life, and without waiting for a line of demarcation to be formed, he immediately amputated the limb about three inches below the trochanter major, which was as low as could be done, the integuments even there being discoloured and œdematous. The patient sunk extremely low after the operation, but revived by the application of stimulants. The suppuration was very considerable for several days, and the sloughing of the cellular membrane so extensive as to require the free administration of wine, tonics, and nourishing food. No exfoliation took place. Six weeks after the accident, the stump had perfectly healed, and the young man was in the enjoyment of excellent health.

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73. *Fracture of the Trochanter Major, which may be mistaken for Dislocation of the head of the Femur.* By Edward Stanley, Esq.—Fracture of the trochanter major, combined with fracture of the neck of the femur, has, under certain circumstances, a strong resemblance to a dislocation of the head of the bone. When from the direction of the fracture, one portion of the trochanter has been drawn by the action of the muscles towards the great ischiatic notch, no crepitus may be observable, and a direct source of mistake from the positive resemblance of the fractured portion of the trochanter to the head of the femur, the former occupying the same place which the latter would do in dislocation: and if with these circumstances there should happen to be an inversion of the injured limb, the difficulty of the diagnosis must be considerably increased.

Case I. A woman, æt. sixty, "fell in the street and injured her right hip. On examination, the limb was found slightly everted and shortened to the extent of three-quarters of an inch, but moveable in every direction. The extremity of the shaft of the femur was in its natural situation, but behind the femur and at a little distance from it, a bony prominence was discovered resting upon the ilium, towards the great ischiatic notch, strongly resembling the head of the femur. Various opinions were entertained as to the nature of the injury, some believing it to be dislocation, and others fracture. After a confinement of several months to her bed, the woman was sufficiently recovered to walk with the assistance of a crutch, and in this state she continued till her death, which took place about three years from the date of the accident, during the whole of which period I had watched the progress of the case. Having obtained permission to examine the seat of the injury, I ascertained that there had been a fracture extending obliquely through the trochanter major, and through the basis of the neck into the shaft of the femur, and that the prominence which had been mistaken for the head of the bone, was occasioned by the posterior and larger portion of the trochanter, drawn backwards towards the ischiatic notch.

Case II.—" A man æt. sixty-five had been knocked down in the street. His scull was severely injured, and he had likewise sustained an injury in the right hip. His death took place on the tenth day from the time of the accident. The particulars of the injury sustained by the hip were as follow:—The limb was shortened and everted. Behind, and at a considerable distance from the extremity of the shaft of the femur, a distinct prominence was discovered, so nearly resembling the head of the bone, that it was presumed a dislocation had occurred. On this presumption forcible extension of the limb was made, which shifted the prominence that had been mistaken for the head of the bone. On examination of the hip after death, a fracture was found extending through the trochanter major and through the basis of the neck of the femur. One portion of the trochanter had been drawn backwards into the situation which the head of the bone would occupy in dislocation; but it still retained sufficient connexion by periosteum, with the shaft of the femnr, to explain the change in its situation during the extension of the limb."—*Medico-Chirurgical Transactions, Vol. XIII.*

74. *Case of Fracture of the neck of the Femur, with Inversion of the Limb.* By Edward Stanley, Surgeon.—" A middle aged man fell in the street, and his hip struck the curb-stone. The immediate consequences were that the limb was inverted and shortened to the extent of an inch: and no crepitus could be discovered. It was presumed that a dislocation had occurred: and accordingly an extension of the limb was made, and so great was the constitutional irritation occasioned by repeated trials to reduce the supposed dislocation, that the man died about five months from the time of the accident. In the dissection of the hip, a fracture was found extending obliquely through the middle of the neck of the femur, but entirely within the capsule. A portion of the fibrous and synovial membrane on the anterior side of the neck of the bone had escaped laceration." —*Ibid.*

75. *Case of Fracture of the neck of the Femur, without injury to the Synovial and Fibrous Covering.* By E. Stanley.—" A man æt. sixty, was knocked down in the street, and on his admission into St. Bartholomew's Hospital, shortly after the injury, he complained of pain in the hip; but there was neither shortening nor eversion of the limb, and its several motions could be executed with perfect freedom and power. In this absence of all the usual indications, a fracture was not suspected: the patient therefore was merely confined to his bed. At the end of a fortnight he had an attack of inflammation in the intestines, from which he recovered, but suffered a relapse, and died in the fifth week from the date of the accident. On examining the body, no trace of injury was found in the parts around the hip-joint; but on opening the capsule, small effusions of blood, apparently not recent, were discovered beneath the synovial and fibrous membrane, covering the neck of the femur, also beneath the synovial membrane covering the ligamentum teres. The head and neck of the bone were sawed through their middle, and in each portion a dark line, evidently occasioned by the effusion of blood, was seen extending through the bone at the basis of the neck. A fracture was discovered extending along this line; but the broken surfaces were in contact, and the synovial and fibrous membrane covering the neck of the bone was uninjured.

" In this case, if an attempt had been made to walk at the end of two or even three weeks from the accident, a separation of the fractured surfaces and consequent shortening of the limb would have been the result. Hence, in cases where the nature of the injury is doubtful, we may infer the obvious propriety of imposing on the patient a strict confinement to his bed for as great a length of time as if the fracture had been ascertained. Another obvious inference is, the necessity of a minute attention to the circumstances under which the accident occurred; these, in the absence of all clear and decisive indications of the nature of the injury, being often our only guides."—*Ibid.*

76. *Case of complete Dislocation of the Articular Processes and Body of the Fourth Cervical Vertebræ from those of the Fifth, without Fracture.* By W. Lawrence, Esq. Surgeon to St. Bartholomew's Hospital.—Complete dislocations of the vertebræ without fracture, are so uncommon, if we except the first and second bones of the neck, that the possibility of the occurrence has been doubted and even denied by some of the highest authorities. Mr. Lawrence relates in the *Medico-Chirurgical Transactions, Vol. XIII.* the following case which came under his care at St. Bartholomew's Hospital.

A robust, healthy man, æt. twenty-two, was carrying a heavy barrel on the back of his head and neck, slipped in descending some steps, and fell on the buttocks, the burden resting on the head and upper part of the neck. He was immediately deprived of sensibility in the trunk and limbs, and of all power over the voluntary muscles of those parts. When brought to the hospital, in the afternoon of January 8th, "he was completely insensible, and incapable of voluntary motion below the neck. The functions of the brain were not disturbed. Respiration was apparently performed merely by the diaphragm: its descent enlarged the chest, while the elasticity of the thoracic and abdominal parietes restoring the parts which had been previously displaced by the diaphragm, seemed to be the only agent of expiration. The chest was motionless, except towards its inferior margin, and the abdominal muscles were soft. The pulse was weak and slow, and the body cold; the penis was in a state of permanent erection. No irregularity in the line of the spinous processes could be discovered by accurate examination. He was placed on the back in bed with the head carefully supported. In four or five hours the pulse had become full and strong, and the heat of the body was greater than natural; respiration was rather hurried. Venesection to sixteen ounces; a dose of calomel and jalap. Four ounces of urine were drawn off by the catheter.

"*Jan. 9th.*—He dozed in the course of the night, but did not sleep. There is pain in the lower part of the neck. He can move the arms very slightly, and has a little feeling in the front and upper part of the chest. Dark offensive stools have been passed involuntarily. When the catheter was introduced in the morning, only a table-spoonful of urine came away: six ounces of high-coloured urine were drawn off in the evening. Respiration is slower, the pulse full, heat natural. Saline draught every six hours.

"10*th.*—Feels better this morning, having slept three or four times in the night for about an hour each time. Has experienced a tingling sensation in the hands, and is sensible to impressions on the upper part of the arms and thighs: stools have passed involuntarily; he complains of distention of the bladder; eighteen ounces of high-coloured urine were drawn off, and deposited a dark brown sediment. The priapism continues. Four ounces of urine drawn off in the evening.

"11*th.*—He has not slept during the night, and is worse this morning. Respiration becomes difficult, so that speaking requires a painful effort; and the countenance expresses distress and anxiety. The tongue is light brown, and dry in the middle. Fæces have passed involuntary, and six ounces of urine, lighter coloured than that of yesterday have been drawn off. Breathing became more laborious in the evening, and the countenance extremely anxious; the pulse weak and low, surface of the body cold. He expired at one in the morning of the 12th, from increasing embarrassment in respiration.

"*Examination.*—No displacement nor irregularity could be discovered by external examination when the body was laid on the face. After cutting away the muscles from the back of the spine, the cartilaginous surfaces of the superior articular processes of the fifth cervical vertebra came into view: they were exposed in consequence of the inferior processes of the fourth vertebra having been completely dislocated forwards, and remaining fixed in their unnatural position. The yellow ligaments connecting the laminæ of the two vertebræ, (ligamenta subflava,) were torn through, and the bifid apex of the fourth spinous process lay in close contact with the basis of the fifth. On the front of the column an unusual projection was observed, but the anterior longitudinal ligamentous expansion was entire. The body of the fourth was completely detached from that of the fifth vertebra, the connecting fibro-cartilage being torn through, and the body of the former projecting by its whole depth in front of the latter. In consequence of this displacement, the antero-posterior diameter of the vertebral canal is lessened by about one-third. The section of the bone was not made till some days after death, so that the recent state of the spinal marrow could not be estimated."

Death was caused by the paralysis of a large portion of the muscles of respiration, and by the consequently imperfect mode in which the mechanical phenomena of that function were executed.

77. *Cases of Lithotomy.*—Mr. **Liston** has published in the *April No.* of the *Edinburgh Medical and Surgical Journal,* twenty-nine cases of lithotomy performed by the lateral method, of which twenty-seven were successful, and one of the fatal cases can scarcely be attributed to the operation; the patient died suddenly apoplectic fourteen days after the operation.

78. *On the Operation of Lithotomy.*—Mr. **Crichton** has published in our esteemed cotemporary, the *Edinburgh Medical and Surgical Journal,* for April, 1828, some interesting observations on the operation of lithotomy. He objects to the term *dissection,* as employed by writers in their instructions for the performance of this operation, as the idea which we attach to that term is the slow and cautious division of a part, fibre by fibre. In the dead subject no inconvenience can result from this, but on the living body every unnecessary incision is unwarrantable cruelty, as well as adding to the danger of the operation. He very correctly remarks, that two, or at most three strokes of the scalpel are sufficient to lay bare the membranous part of the urethra; and certainly the less the parts are mangled, and the more direct and continuous the opening is, the less risk there will be of urinary infiltrations and sloughing sores.

There is, Mr. C. says, great want of clearness in the directions given by authors for finding and laying hold of the stone. Directions are given as if the stone were to be searched for in a distended bladder, or an empty space; whereas, when the bladder is laid open the urine escapes, and the bladder contracts around the stone, and the latter is to be found close to the opening, at least it has been so in nearly one hundred cases, in which the operation has been performed by Mr. C. The difficulty and delay in finding it, is owing, he thinks, to operators not adverting to this plain circumstance, and consequently "the forceps are at one time passed over the stone carrying the coats of the collapsed bladder before their point; they are opened and shut, shut and opened; they are pushed this way and that way, and still nothing is found; the stone all the while lying behind the blades. At another time the stone is pushed before the points of the forceps, and a portion of the bladder contracting around it like the finger of a glove, it cannot be laid hold of. The like may also possibly happen from the bladder being too much distended with urine, in consequence of the cruel and absurd practice recommended and sometimes adopted, of compressing the urethra for some hours before operating, in which case the bladder, when suddenly emptied, may collapse irregularly, and retain the stone, especially if it be a small one, betwixt its folds."

Mr. C. recommends attempting to unite the wound by the first intention. In a patient of good habit of body, when the incisions have been properly conducted, the stone not large and readily extracted, and when the urethra and prostate gland have been divided by one cut, without hacking and mangling, there is reason, he says, to think the attempt might not unfrequently succeed, and thereby divest the operation of much of its terror and accompanying distress. "It is only," he adds, "within these few years that my attention has been directed to this part of the subject; and I have already had the satisfaction of witnessing the wound made in the operation healed by the first intention in five instances, the urine passing off by the urethra from the commencement, and continuing to do so, whereby the cures were remarkably expedited. One of these cases was a child of nineteen months, where the wound did not require a second dressing. In another of three years, the child was out, and going about within eight days after the operation. A third was five years; and the other two of seventy years. The two old men were each out of bed, and walking about the room, within three or four days after the operation."

Mr. C. has performed the operation of lithotomy for thirty-six years, without in one instance declining to operate, however unpromising the case may have been; and he has given a list of seventy operations, (two in females,) performed on individuals of various ages, from one year and a half to eighty-five years, of which nine were unsuccessful. Of these latter, five, or perhaps six, were so unpromising that few surgeons would have ventured to operate. In one, the patient, (a man aged sixty,) had laboured under symptoms of calculus upwards of ten years, and had taken to the use of spirituous liquors for relief. For four months previous to the operation, his sufferings had been without intermission, accompanied with a constant discharge of bloody, fœtid, puriform matter, and occasional attacks of epilepsy. Of course it would not be fair to compare Mr. C.'s success with that of other surgeons.

It is but justice to Mr. C. to mention that some of his successful cases were far from being promising. In one, the patient was in a state of the greatest emaciation and debility; every five minutes he was straining to pass his urine, which seldom exceeded a tea-spoonful at a time. Upon examination there appeared a great bulging into the rectum, obstructing the free egress of the fæces. In another, the patient, along with the symptoms of calculus, had been for many years affected with dyspnœa, so as to prevent him from lying down in bed, with palpitation of the heart, cold extremities, &c. This case appeared so very unpromising that the surgeon of the infirmary refused to operate. On Mr. C.'s accession to the charge, he yielded to the man's entreaties and operated. It is remarkable that within a few days after the operation, his pectoral complaints in a great measure left him. A third had been affected for twelve years with cough, dyspnœa, and puriform expectoration, as also frequent attacks of nephralgia, followed by bloody urine, passing sand and small stones to the number of two hundred and seventy-four; and in addition to all these, had been for twelve months tormented with stone in the bladder. A fourth was paralytic of the left side.

One patient died tetanic, an extremely rare sequela of the operation. He was doing exceedingly well until the eighth day, when he was seized with a severe pain in his left heel, striking upwards with convulsive twitches. The spasms extended the following day towards the muscles of the neck, and he died three days afterwards.

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79. *Tracheotomy, for the Removal of a Foreign Substance in the Trachea.*—This operation has been several times performed in this city, but, as far as we can learn, without success; indeed, the operation is so generally fruitless, that most surgeons, we believe, are disposed to decline operating. The following case, in which it was successfully performed by Professor Gräefe of Berlin, will be read with interest.

"A girl, nine years of age, whilst laughing, suffered a bean of a large size to pass into the trachea, which excited at intervals a convulsive cough, which continually increased in violence. She was brought to the hospital thirty-six hours after the accident. Fits of suffocation alternated with attacks of exhaustion, and there was a severe pain beneath the upper part of the sternum, increased at each inspiration. Although it was feared that the bean had reached the bronchi, an incision, one inch in length, was made in the lower part of the trachea; the speech was immediately suppressed, and a quantity of bloody mucus escaped from the wound. This relieved the patient; nevertheless, the bean could not be discovered either by a probe or straight forceps introduced into the bronchi; trials which could not be repeated, because each time the mucous membrane was touched produced a violent attack of suffocation, attended with universal spasms. The patient was bled, had a dose of opium given to her, and a piece of gauze was placed over the wound. She had a tolerable night; but the next day the attacks of suffocation returned with such violence that her life appeared in the greatest danger. The incision was therefore prolonged nearly to the upper edge of the sternum, and again an attempt was made to pass a small pair of forceps into the bronchi, but it caused a recurrence of the spasms and a convulsive cough, during which the epidermis of the bean became visible, but which disappeared instantly before it could be laid hold of. It again showed itself, however, and was extracted; the length was nine lines by four and a half wide. All the bad symptoms disappeared; the wound healed in about a month; the speech was restored, and nothing remained but a hoarseness."—*London Medical Gazette, Vol. I.*

80. *Case of Hydatids of the Liver cured by an Operation.* By M. Martinet.—"A ship-painter, named Damenge, aged twenty years, of strong constitution, and who had enjoyed habitual good health, with the exception of some attacks of colic, fell from a stage on the 26th April, 1827, to a distance of ten or twelve feet, and was picked up insensible. On the next day, a slight yellow tint was perceived on his countenance, which soon spread over the whole surface of his body; but, as his health was not affected, he returned to work on the 28th of the same month. On the 30th he felt pain in the right hypochondrium, and he could not lie on either side in bed. The pain in his side was accompanied by a retraction of the corresponding testicle, to which were added thirst and fever. This state continued till the 3d of May, when he was received into the Hôtel Dieu.

"There was now very little fever—a slight yellow tint pervaded the surface of the body—tongue scarcely white—no head-ache—no pain in the right shoulder—constipation during the last four days. In the right hypochondrium there was a tumour of irregular form, but not lobulated, extending from the ensiform cartilage to the edges of the false ribs, (which were a little raised,) downwards to below the umbilicus. Pressure produced but little uneasiness, and the sense of touch discovered the presence of several bodies, somewhat hard, salient, unequal and pulsative. The pulsation was considered as *communicated* from subjacent vessels. In several points an obscure fluctuation was perceptible. Percussion elicited a very dull sound from the whole of the upper and right side of the abdomen, down as low as the right flank. On striking various points of the abdomen with one hand, while the other was kept steadily on the tumour, no shock was communicated to the latter. The application of the ear to the parts communicated no sound, but rather an absence of all sound. *Venesection—low diet.*

On the 4th May a very fine trocar was introduced into the part where fluctuation had been least equivocal, and a cupping-glass applied. A few drops of limpid fluid escaped by the aperture. During the succeeding days, the health of the patient improved and the icterus diminished. A caustic of potassa fusa was applied on the most salient point, under the false ribs—this was repeated on subsequent days. Mean time, the tumour seemed to get flatter and lessened in volume. On the 15th May the eschars fell off, and, on the 19th, the tumour opened spontaneously into the bottom of the wound, and discharged a great quantity of yellow fluid, containing numerous hydatids. The diameter of the opening was about half an inch. Three basins were quickly filled with this discharge, and innumerable hydatids of various sizes, up to that of an egg, (elongated in passing,) were disgorged with great diminution of the volume of the abdomen. The majority of these acephalocysts presented transparent coats, two or three in number, containing an aqueous fluid, which soon turned opaque on being exposed to the air. During the next few days there was a considerable discharge of hydatids, and the patient continued free from fever. Some mild fluids were injected from time to time, and returned nearly colourless. The hydatids that issued on the 23d of May were of a yellow colour, apparently tinged with bile. The tumour had greatly subsided, and a pretty tight bandage was kept round the abdomen. The injection returned this day, rather fetid in odour. 26*th.* The injection returned much less fetid. In the course of the following days, an injection, composed of decoction of bark and solution of chloruret of lime, was employed, and produced some smarting pain. On the 5th June, a slight diarrhœa came on, which was remedied by a more restricted diet. On the 11th June, there could not be more than four ounces of injection thrown into the cyst; and, by the 22d of the same month, it was impossible to introduce any thing. *5th July.* A slight discharge of purulent matter takes place every day, and the wound is closing fast. On the 6th July, the discharge presented the odour of feculent matter; and, next evening, some fragments of pease eaten at dinner were unequivocal in the discharge from the wound. From the 8th till the 20th of the same month, portions of undigested aliment presented themselves among the discharge, which was always of a stercoraceous odour. Sutures were tried to close the fistula, but they failed. On the 30th the patient left the hospital in perfect health, with the inconvenience only of a small stercoraceous fistula. In the early part of August he presented himself at the Hôtel Dieu, with the fistula completely cicatrized, and his health excellent.—*Medico-Chirurg. Rev. April,* 1828.

81. *Treatment of Burns with Cotton.*—This mode of treatment, which is frequently employed in this country, has been recently tried in several cases of severe burns in the Royal Infirmary of Glasgow, with complete success. I. H. Plymsoll, Esq. in his surgical report from that institution, relates some of these cases; and remarks, that the advantages of the treatment with cotton is so evident, that the practice has become established in the infirmary. The cotton has, he observes, "the power of accommodating itself more than the ordinary applications to those irregularities of surface which are generally occasioned by extensively deep burns, and, consequently, of being brought into more close approximation with the injured parts. Bandages can be applied with almost any degree of pressure, without producing irritation; an equability of pressure is, therefore, kept up on the whole extent of the injury, which has the effect of levelling irregularities, and of repressing the growth of exuberant granulations, and ultimately of effecting a regular and uncontracted surface. The skin which is formed under this treatment is not a smooth, continued skin, as in other cases, but possesses almost the same degree of mobility and elasticity, and those insensible indentations which are observed in the original skin. This method of treatment, therefore, is particularly advantageous in burns where the joints are involved, and also in burns of the face, and other parts which are exposed to view, as a cure is effected without restraining the motions of the joint, and without exhibiting the slightest deformity of the face. The granulations will sometimes become prominent, in consequence of a sufficient degree of pressure not having been kept up. In order to obviate this inconvenience, patent lint covered with sheet lead, may sometimes be substituted with advantage. Should this produce much irritation, however, cotton, moistened either with a solution of the sulphate of copper or chloride of lime, should be again applied, and with increased pressure: this will have the same effect, without being productive of any uneasiness to the patient. The great point, however, in this practice, is the continuation of the dressings, without which, all our efforts will prove inefficient. They should never be removed until it is absolutely necessary, either from the excessive discharge from the wound soiling the cotton, or the insupportable fetor which may arise from it: this last inconvenience, however, may be corrected by the chloride of lime. Many surgeons have attempted this practice, but, ignorant of the necessity of continuing the dressings for several days, have been quite unsuccessful. The reason of this is obvious:—The cotton adheres with such tenacity to the raw surface of the wound, that, in removing the dressings daily, it cannot be accomplished without producing a considerable degree of irritation, and disturbance of the restorative process. It is of importance to observe that, when a part of the dressings are soiled, it can be taken away without removing the whole of the dressings. In the cases which have been treated in this infirmary, the dressings have been removed about once in six or eight days on an average."

82. *On a Peculiar Species of Traumatic Delirium.* By M. DUPUYTREN and M. HELIS.—It is very justly observed, "that it is not merely sufficient to prepare a patient for a surgical operation, and to perform that operation adroitly; the more difficult part remains—the subsequent treatment. The moral and physical shock of an operation predisposes a person peculiarly to those accidents which naturally arise from the wound, and the judgment of the practitioner on

these occasions, is often of more importance to the patient than his manual dexterity while the knife was in his hand. There are still some disciples of Frère Jacques in the surgical world. 'I have cut you for the stone—may God cure you.' If trifling injuries and operations are sometimes followed by the most serious constitutional disturbance, how careful should we be after great operations, to guard the patient against every source of supervening disease! Sometimes we see deep-seated inflammation arise in an organ or part to which the knife has been applied—and the sympathetic fever kindled up destroys the patient, when success seemed certain. At other times, a rigor announces the formation of matter in some vital organ, when the preceding fever was so masked, or so trifling, as to throw the surgeon off his guard. In other patients, the nervous system becomes highly irritable after an operation, and spasms or tetanus itself ensue. In some, a species of delirium succeeds the operation, which is of singular frequency, and by no means devoid of danger. Obscure in its causes, variable in its march, but alarming in its symptoms, traumatic delirium is rarely fatal, if treated judiciously and energetically." Seven cases are detailed, selected from a great number that have occurred in the wards of M. Dupuytren.

"Case I. A young man from the country was operated on by M. Dupuytren in the month of June, for sarcocele of large size. He was much afraid of hæmorrhage, and kept himself in a fidgetty state all the day after the operation. On the third day he was still more anxious, and he was irritated by every motion, gesture, or word of the neighbouring patients. Soon afterwards he complained of pain in his limbs and in his chest. His eyes became animated—his breathing hurried—he demanded food—and insisted on getting out of bed. In short, he was evidently delirious. His cries, the sparkling of his eyes, the immobility of the pupils, the perspiration on his face, the calm and regular pulse in the midst of this commotion, convinced M. Dupuytren that the patient was affected with nervous delirium, (delire nerveux.) Nevertheless he examined the chest, of which he so much complained, and found no disease there. A few drops of laudanum were immediately thrown up the rectum, and the patient was secluded from all visitors, so as to be kept quiet. In half an hour the patient fell into a profound sleep, from which he did not awaken till the succeeding day, when he was completely tranquil. No accident afterwards occurred.

"Case II. An old man was operated on for hernia by M. Dupuytren, and was put to bed in the most promising state. In a few hours afterwards, it was discovered that he had torn open the wound, in a fit of delirium, and actually lacerated some portion of intestine, which he had strained down! He died in terrible torments, from the supervening peritonitis.

"Case III. A stone-mason fell from a stage, and luxated the left femur. He was taken to the Hôtel Dieu, and M. Dupuytren reduced the bone. The next evening the patient was found in a state of alarming agitation; his eyes glistening, injected, and red; face flushed, and covered with perspiration. He vociferated aloud; tried to tear off the bandages; and endeavoured to escape, as he said, from the hands of justice. In the midst of this disorder of the senses, the pulse was regular, full, and of natural frequency; the skin cool. The sister of the ward, accustomed to these accidents, immediately administered laudanum in injection, and tranquillity was quickly restored, without any return of the nervous delirium."

This disease has been considered by most surgeons as inflammatory, and consequently has been treated by wrong measures. "M. Dupuytren thinks, that if left to itself, it would only produce a temporary exhaustion; but in the mean time irreparable injury might be done to the wounds produced by accident or operation. It is of great importance to be able to foresee or predict the supervention of this curious nervous commotion, and the author thinks that by the following signs we may prognosticate its approach.

"If, then, within twelve, twenty-four, or forty-eight hours after a fracture, a luxation, an attempt at suicide, or a surgical operation, the patient appears in unusually good spirits, with talkativeness, glistening eye, and quick movements; if he affect an unusual degree of courage and resolution, be on your guard! Do not irritate or excite him; keep him quiet, and exclude all but his nurses, as well as light and noise. Very soon he will assail you with all kinds of questions—he will flatter, menace, abuse, sing, cry, and give way to unceasing loquacity. This is not always the most innocent kind of insanity. Our author has known men in this state, get up in the middle of the night, seize some weapon, and commence a war of extermination on all within their reach. He has known others throw themselves out of the windows, or commit suicide in some horrible manner. The most remarkable phenomenon in these cases is the calmness of the circulation, and the total absence of any febrile symptom. It is a veritable mania, of short duration. He has rarely known it last longer than five or six days. The treatment is very simple. Quietude, security, some laudanum, by way of injection. M. Dupuytren prefers this mode of administering the remedy greatly to that by the mouth. He avers that, from six to ten drops, given in this way, produce more effect than triple the quantity, given by the mouth."—*Medico-Chirurgical Review, April,* 1828, *from the Repertoire Générale.*

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83. *Nævus Maternus cured by Vaccination.* By William Young, M. D.—A girl, æt. three months, was admitted into the Glasgow Royal Infirmary, with a roundish tumour, nearly as large as a sixpence, on the right side of the chin. "It was considerably elevated above the surrounding skin, had a purplish colour, and appeared formed of blood-vessels. At birth, the tumour was only the size of a split pea.

"Around the border of the tumour, as well as all over its surface, minute punctures were made, and vaccine lymph freely applied. In ten days thereafter, the whole disease was involved in one pustule, but when this became incrusted and was thrown off, there still remained a dark-coloured, prominent, and diseased surface. Another suppuration succeeded; and a third; when at the end of five weeks a complete cure was effected, no trace of the disease remaining, nor mark, further than what follows vaccination on a healthy part.

"This cure was hardly completed, when another little child was presented in private practice, with a nævus advancing rapidly, and occupying the middle and edge of the upper eyelid. The same process was followed, with very similar results. A cure was effected, but after a very tedious festering and ulceration. Indeed, it appears evident that nothing further is required to effect a cure, than to institute a process of suppuration, by cow-pox, by caustic, or by any thing else. As the most gentle of all these means, vaccination is entitled to a preference. But when this has been used in the common way, and for the ordinary purpose, and before a mark of this kind has excited much attention, I am inclined to think that an *antimonial plaster* would constitute by far the best substitute. I am sorry that no case has as yet occurred to give me an opportunity of making the experiment."—*Glasgow Medical Journal, February,* 1828.

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84. *Successful Ligature of the Axillary Artery.*—Dr. G. C. Monteath relates in the first number of the *Glasgow Medical Journal,* a case in which the axillary artery was successfully tied in a man aged twenty, whose right arm had been run over by the wheel of a heavy coach, so as to have bruised it from near the shoulder to the wrist, but without any laceration of the skin. The wheel had crossed the arm about half way up the biceps muscle. Violent pain and swelling followed, and on the twentieth day almost all the integuments and cellular substance on the inner and under sides of the arm and forearm had sloughed, leaving the muscles as if they had been dissected. In some places the periosteum of the humerus was exposed, and the median nerve was visible at the elbow. The veins at the bend of the arm were exposed and dead, and the biceps tendon quite bare. In the evening a sudden hæmorrhage ending in syncope took place from the arm just where the wheel had crossed it, in all pro-

bability from the humeral artery having given way. The heat of the extremity was natural, and the radial pulse perceptible, though very small; some days after the accident no pulse could be felt, but it had returned. The next day Dr. M. saw the patient, and determined to tie the axillary artery. Accordingly he applied a single ligature on the artery, two inches above the tendon of the latissimus dorsi. The ligature came away on the eighteenth day, and the wound of the arm caused by the scalpel healed in six weeks, but that produced by the injury did not cicatrize until fifteen months after the operation.

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85. *Case of Pulsating Tumour of the Scalp, from Dilatation of the branches of the External Carotid Artery.* By G. M. Maclachlan, M. D.—A discharged soldier, æt. 30, presented himself to Dr. Maclachlan, with a soft, pulsating, and somewhat elastic swelling of a varicose appearance, occupying "the course of the temporal, posterior auris, and occipital arteries and their principal branches; each branch terminating by a tortuous extremity. These swellings could be made partly to disappear on pressure, but on its removal they speedily regained their former volume. They pulsated throughout their whole extent, and the pulsations were synchronous with those of the heart. By pressing on the common carotid, the pulsations ceased all along the swellings; and, by intercepting the flow of blood through the temporal or posterior auris, the throb was interrupted in corresponding parts of the tumour. They were not painful on being handled, but he complained much of the torture he had experienced for the last two months, from the throbbing, which often deprived him of rest for nights together, and, as he said, made his existence miserable to him. The integuments covering the swellings were of their natural colour; only at those points which were most prominent, they had a slightly bluish-red tinge.

"This *arborescent* tumour commenced in front of the ear, immediately over the zygoma, and quickly swelling out, it became of the size of a split lemon, lying transversely over the ear. It sent a process forwards on the forehead, communicating by a tortuous extremity with the supraorbitary twig from the internal carotid; a large process upwards to the crown of the head; and backwards, the main body of the tumour communicated with the puffy swellings of the posterior auris and occipitalis, which latter vessels gave a varicose feeling to the scalp over the left side of the occiput.

"The largest and most prominent part of the tumour was immediately over the ear: at this point, the throbbing was very violent, and the integuments being very thin and rather pointing, it threatened ere long to burst."

Ten years previously, he had the temporal artery opened, and a small aneurismal tumour formed at the point of incision, for the cure of which, the artery was cut across, lower down; but this not succeeding, a ligature was applied to the vessel. The tumour disappeared only for a time; on its return, it was but small, and gave him no uneasiness.

Pressure had been tried, and gave him so much pain, that he refused to submit to it, and Dr. M. determined to take up the vessels singly, and if that failed, to tie the common carotid. Accordigly, he laid bare "the temporal artery as it emerges from the parotid gland: but on dividing the fascia-like substance which kept it in situ, it shot forth through the opening in the form of a loop, in calibre larger than a goose-quill; thinner in its coats, and, if possible, more diaphanous than a vein; and thrilling violently at each pulsation. A ligature was applied to this loop; the wound was brought together with adhesive plaster, and, for additional security, a firm compress and bandage were applied. It was now evident that the vessel was diseased at the point of ligature, and the propriety of tying the common carotid hence became obvious. Pulsation had, however, ceased in the anterior and central portions of the tumour, which felt flaccid and doughy, showing that this plan of treatment would, in all probability, have been successful, so far as the vessels of the scalp, at least, were concerned, could the state of the arteries have been trusted to."

The next day the common carotid was tied; immediately on which the varicose tumours of the head became devoid of pulsation and felt flaccid, although their prominence was but little diminished. The day after the operation, he was seized with severe pain in the chest, and notwithstanding very active depletory measures were adopted, he died on the fourth day.

Dissection, fifty hours after death.—The weather being very hot, putrefaction had made considerable progress. The viscera of the abdomen appeared healthy. "Some straw-coloured, puriform matter was found in the anterior mediastinum: about a pint of thick, grayish, mucopurulent matter in the right cavity of the pleura, and a small quantity of bloody extravasation into the left. The pericardium was unusually devoid of fluid—the heart large and flaccid. The wound, which had adhered throughout its whole extent, by the first intention, had partially re-opened from putrefaction. The carotid, the par vagum, and jugular vein appeared as if they never had been disturbed—nor was there the least appearance of pus around the ligature. On slitting up the artery, and cutting through the ligature at the same time, (the ligatured portion having been previously removed from the body,) small but soft clots were found above and below the ligature, and the artery remained puckered from the recent deposition of lymph. Its inner coats were divided as with a knife, while its external was found dense, strong, and entire. Below the ligature, the inner coat of the artery was of a vermilion red colour, even that of the thoracic aorta bore equal marks of inflammation, but at the bifurcation it was of its natural aspect; that portion also of the aortic arch nearer the heart than the coming off of the left carotid, was healthy. The carotid in the neck was of its usual size, strength, and thickness; but on examining its branches on the head, they were found to have degenerated into dilated tubes of extreme thinness and transparency; which, apparently yielding to the impetus of the blood, had become elongated, contorted, and ultimately convoluted on themselves, so as to form by this species of doubling, the tumours which constituted this singular disease. These tumours felt like placenta, and to the eye, the larger portion immediately over the ear looked precisely like a bundle of earth worms coiled together."

Dr. M. regrets that he could not investigate more particularly this unusual disease of the arterial system, nor ascertain whether the internal carotid was affected, and thus giving rise to the epileptic fits to which the patient had recently become subject.

Pelletan is the only author who has distinctly described this disease: in his Clinique Chirurgicale, tom. ii. he relates two cases.—*Glasgow Medical Journal, February*, 1828.

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86. *On the Causes of the Fatal Termination of certain Cases of Bronchotomy.*—Dr. Cullen, in the number of the *Edinburgh Medical and Surgical Journal,* for July, 1827, called the attention of the profession to the physiology of coughing, and to the danger which necessarily attends on a copious secretion of mucus from the bronchi when an opening has been made in the trachea. For, to produce full and vigorous coughing, so as to clear the minute branches of the bronchi of their fluid secretion, the expiratory muscles must for a certain time act in opposition to the constrictor muscles of the glottis. When, by this antagonism, the former have acquired sufficient force, the latter are suddenly relaxed, and *in the moment of their relaxation* coughing takes place, and mucus or pus is expectorated along with the air thus violently expelled; but when an opening is made into the trachea, expectoration immediately becomes difficult, for the expiratory muscles have no longer their antagonist constrictors of the glottis to act against. They cannot therefore acquire sufficient force to produce that strong current of air which is at least highly favourable to expectoration. A patient, therefore, after bronchotomy, cannot perform the act of coughing, properly so called. He can only expire with a force proportioned to the quantity of air he can take into the lungs.

The truth of these observations is borne out, he says, by what he has noticed in all the cases in which he has seen bronchotomy performed. He has uniformly observed that expectoration immediately became difficult after the operation. The patient could not drive the expectorated matter through the canula, for the current of air was too weak; and hence he has seen death ensue from a small quantity of blood getting into the trachea.

These considerations have led him to some important practical views, and enable us to explain the fatal termination of many of the recorded cases of bronchotomy. In the *first* place, the canula employed ought always to be large. If it be small, the breathing will be difficult. During the inspiration, blood will be sucked into the trachea from the edges of the wound, and a quantity of air sufficient for the purposes of respiration will not be admitted to the lungs. *Secondly.* When inflammation exists in the minute branches of the bronchi, attended with plentiful secretion, the introduction of a large quantity of air is absolutely necessary for expectoration. A small quantity of air cannot acquire sufficient force to bring up along with it the secretions of the bronchi. We can explain on the same principle why bronchotomy is so rarely successful when diseases have extended into the minute branches of the bronchi. After the operation the expectoration becomes more difficult, from the constrictor muscles of the glottis being rendered useless. Mucus accumulates more and more down the air-passages, and the patient dies gradually suffocated. In severe cases of inflammation of the lungs, the expectoration is commonly suppressed a short time previous to death, but it does not cease to be secreted; it is only not excreted; for, in proportion as more and more of the lungs becomes useless for the purposes of respiration, of course, a less quantity of air can be introduced at each inspiration, till at last the quantity is insufficient for a forcible inspiration or coughing, then, of course, the minute branches of the bronchi continue loaded, and the patient is suffocated.

From these statements, Dr. Cullen draws the following practical conclusions:—1st. Bronchotomy should not be performed in cases where inflammation and copious secretion exist in the minute branches of the bronchi, at least such cases are most likely to terminate unfavourably. The operation if performed, may relieve the breathing for a while, but it may occasion in a short time a suppression of the expectoration.

2d. We should always make use of a large canula for the sake of permitting free expiration, the only substitute for coughing, which the patient can no longer effect.

3d. *The operation of bronchotomy is not in itself unattended with danger;* and even slight wounds of the trachea may be fatal from their effect in suppressing the excretion of the mucus of the air-passages.

4th. The absence of expectoration may be either very favourable or unfavourable to the performance of bronchotomy. It is a very favourable symptom when it depends on the sound state of the mucous membrane of the bronchi. It is most unfavourable when it depends on such a closure of the rima glottidis that too small a quantity of air can be introduced to effect coughing.—*Ed. Med. and Surg. Journ. Jan.* 1828.

87. *Treatment of Ulcers of the Leg in Old Subjects.*—" Slight scaly induration of the cuticle with erosion or superficial ulceration on the lower part of the legs, is very common in old age, is always obstinate, and often incurable. In this affection, M. Lisfranc has lately found the following treatment successful. The crusts having been detached by emollient poultices, a compress spread with common cerate, and having a central opening, was applied so as to leave only the sore exposed, and upon this opening was laid a thick pledget of lint, soaked in a weak solution of chlorate of soda, (à trois degrés.) By perseverance with this dressing, a complete cure was generally obtained in a week, or a fortnight at most."—*Journal Gén. de Med. Oct.* 1827.

88. *White Swelling of the Elbow Joint, with removal of the Elbow Joint.*—In our first number, p. 223, et seq. we offered some remarks on the excision of

carious joints, and gave three cases in which the operation was performed by Mr. Crampton, of Dublin. It appears that Mr. Roux has also performed this operation three times, all of which have been successful. "A girl, nineteen years of age, bearing the scars of an old scrofulous affection upon the back of the left hand, was admitted at La Charité with a white swelling of the elbow joint, with great enlargement of the soft parts, caries of the extremities of the bones, and several fistulous openings giving vent to a sanious discharge. The constitution of the patient had not suffered in any great degree; nevertheless it was evident that the disease could only be got rid of by amputation of the arm, or removal of the diseased portions of bone. M. Roux preferred the latter, and the operation was performed December 9th.

"The patient being placed upon her belly, and the diseased arm brought from the trunk: two incisions, two inches in length, were made along the external and internal edge of the humerus parallel to the axis of the limb; these incisions reached as low as the joint. A transverse incision across the posterior part of the articulation joined the two former, and from these three incisions a quadrilateral flap resulted, which was detached from below upwards. The humerus being thus exposed, was isolated by means of the knife from the soft parts to which it was attached; a thin piece of wood was inserted between these parts and the bone, which was then sawn off just above its tuberosities. The lateral incisions were then prolonged below upon the edges of the forearm for the space of two or three fingers' breadth; a flap similar to the first was detached from above downwards; the upper extremity of the radius was separated from the soft parts and from the ulna, and the radius was removed above its tuberosity. The extremity of the ulna was then isolated, preserving the insertion of the brachialis anterior, and the extremity of the bone was sawn off immediately below its articular surfaces; by this contrivance the lower insertions of the brachialis and biceps were preserved. The median and radial nerves included in the mass of the soft parts anteriorly were not touched, but the cubital nerve was cut, and even lost a portion of its substance. The wound produced by this operation was large, deep, and formed in indurated and diseased tissues. The edges were brought together, and maintained by fifteen points of interrupted suture; lint spread with cerate was applied upon the wound, and fixed there by compresses and a bandage. The limb was placed in a hollow splint of tin.

"On the day of the operation, the patient experienced violent pain, and could not sleep on the following night. On the 10th, there was pain in the epigastrium, increased on pressure; intense head-ache; violent thirst; white, moist tongue; pulse moderately frequent, but hard.

"Low diet and diluents were ordered.

"12th, (fourth day after the operation.)—The wound was dressed. The bandages were scarcely moistened with a bloody and purulent serum; very little tumefaction of the wound. The sutures were removed, and the edges appeared united; the incisions were marked by straight lines of a red colour.

"Simple dressing. Jalap, with two drachms of syrup of poppies, in the evening.

"Suppuration soon became more abundant, but bore no proportion to the apparent extent of the wound; the radial and cubital incisions were separated more considerably, the one at its upper, the other at its lower extremity, and discovered the opening of a sinus, which evidently led into the cavity resulting from the removal of the bones. Excepting this, every thing improved from day to day: the appetite revived, the sleep was good, and the patient recovered her spirits. After employing sticking plaster for some days, simple cerate was employed, and two pasteboard splints supplied the place of the tin case.

"January 10th.—The suppuration is good, but its quantity has not much diminished; a portion of it still comes from the bottom of the wound. The transverse incision is in a great measure healed; the extremities of the bones of the forearm and arm do not meet; the cubital edge of the ring finger has regained its feeling, but the little finger may be pinched without the patient's being at all conscious of it. The patient's health is perfectly good.

"This is the third operation of the kind M. Roux has performed, and they have all succeeded. One of the former patients died afterwards of phthisis; the other is still alive. No callus is formed at the extremities of the bones, they seem to be replaced by flexible fibro-cellular tissue: the forearm is moveable; it cannot be, indeed, bent or straightened at pleasure, but the patient gives it these motions with the assistance of the other hand. This man is a grinder by trade, and finds the limb very useful."—*London Medical and Physical Journal, April,* 1828.

89. *Breaking down Calculi in the Bladder.*—M. AMUSSAT has laid before the Academie Royale some observations upon those cases in which it may be prudent to attempt to break down the calculus in the bladder, and those in which the operation for lithotomy must be had recourse to. If the patient is not nine years of age, the operation will be necessary, as the urethra will not, before that period of life, admit the necessary instruments for breaking down the stone. If the stone is of a large size—if the bladder, the prostate gland, or the kidnies, are diseased; or if any of the vital organs are diseased, and if the patient has for a long time been afflicted with stone in the bladder, the operation of lithotomy will be necessary. The surgeon should only have recourse to breaking down the stone in the bladder when the patient is in good health, and is not seriously affected by the symptoms produced by the presence of the urinary calculus. M. Lisfranc, however, mentioned the case of a child, of seven years of age, in which the stone had been broken down with success by M. Civiale. The same operation had also been performed upon a patient, notwithstanding he laboured under disease of the prostate gland.—*Archives Gen. Jan.* 1828.

90. *Medullary Sarcoma of the Testicle.*—Mr. EARLE relates, in the *London Medical Gazette*, Vol. I. No. 10, two cases of this disease, in both of which he extirpated the testicle, and there is reason to hope that the cure is complete.

MIDWIFERY.

91. *Case of Indurated Enlargement of the Uterus, successfully treated with Iodine.* By R. A. THETFORD, M. D.—J. R. æt. forty, costive habit, accustomed to use purgatives constantly and in large doses, had not had any evacuation from the intestines for seventeen days, though large doses of purgative medicines had been taken—for the last three days her stomach rejected every thing except a little porter—head-ache—total want of sleep—pulse 108 and very feeble—abdomen enlarged and tender on pressure, particularly in the epigastric and hypogastric regions—urine passed with pain and mostly by drops. Had borne one child when about sixteen years old. The bowels were relieved by enemata, followed up by oil, &c. and her general health and strength improved, but the tenderness and pain in the hypogastric region continued, also the pain in passing urine, which still came away in small quantities at a time. The pubic bones were very sensitive to the touch, and a tumour was felt above the symphysis. The patient acknowledged that there was a hard tumour in the vagina, which was very painful, and had gradually increased in size without any discharge from it. Menstruation had ceased for some months. On introducing a finger into the vagina, a projecting substance was felt, which was easily ascertained to be the os uteri, somewhat enlarged, and firmer than natural; beyond and connected with which, a large tumour of osseous hardness opposed resistance. The tumour was the uterus of great size, and in a state of induration. Dr. T. ordered alterative doses of corrosive sublimate, with pills of conium and hyosciamus, with strict attention to the bowels. This treatment was persevered in for thirty-

six days; but although her health amended, neither the size or hardness of the uterus was reduced, nor the pain of the pelvic bones much alleviated. It was therefore determined to try the tincture of iodine, which was commenced on the 14th of June, in doses of seven drops three times a day, in a wine-glassful of cold water, and the dose was gradually increased to ten drops, every medicine being discontinued, except castor oil when required. Her appetite speedily improved; intestinal evacuations in general sufficient; urine passed in greater quantity at a time, and with diminished pain; rapidly progressive absorption of the diseased substance of the uterus; periodical return of the catamenia. On the second of August she was perfectly restored to health and continues so.—*Transactions of the King and Queen's College of Physicians in Ireland, Vol. V.*

92. *Case of Double Uterus, with Double Impregnation.*—An extraordinary case of this description has been related by Dr. Geiss, of Traffurth near Earfurt. "The woman had been in labour for two days, when he was requested to attend her. He found her a stout, healthy female, of middle stature. The labour-pains were confined to the right side. On the right side, the womb reached as high as the thorax; on the left it did not extend above the navel, and inclined forwards and laterally. The external parts and os uteri were properly constructed, and the shoulder of the child could be felt behind the membranes. The operation of turning was performed, and a healthy female infant delivered, upon which the right side of the abdomen sunk in while the left continued prominent. In an hour the labour-pains recurred, and on examining the state of the parts, Dr. Geiss found, that after passing the os uteri, the finger came in contact with a membrane distended by fluid, and protruding through an annular opening towards the left side, while the navel-string of the child already delivered, extended upwards into a cavity like the uterus in ordinary circumstances. On farther examination, he found the belly of a second child presenting at the accessory orifice, and therefore performed the operation of turning, and brought into the world a stout still-born male child, which was soon recuscitated. As no placenta followed for some time, he proceeded to assist the separation of them, and had then an opportunity of completely satisfying himself that his patient had a double uterus. The right placenta came away first, and the right womb contracted vigorously; the left placenta followed, but the uterus of that side contracted slowly, and the woman therefore lost a good deal of blood. Two months afterwards the mother and both children were in good health. Two years before, she had brought forth a single child, and the labour was tedious, and required manual aid to accomplish."—*Edin. Med. and Surg. Journ. April,* 1828, *from Rust's Magazin, Vol. XX.* 568.

93. *Hints respecting the Treatment of Lacerated Perinæum.*—"The known fact, that mucous surfaces do not readily adhere when abraded or inflamed, forms a very striking pathological distinction between them and serous surfaces. This, it should seem, does not arise so much from peculiarity of structure, as from the circumstance of the presence of mucus, which will not mix or amalgamate with the fibrin of the blood, and therefore prevents the formation of that bond of union which is essential to adhesion. Hence we see why it is so difficult to effect union in the operations on the soft palate. The mucus of the nares constantly flows upon the incised surfaces, and prevents the process. A knowledge of this fact has not, to my recollection, been applied to the treatment of laceration of the perinæum, one of the most distressing accidents that occurs in practice to a young accoucheur.

"I have observed that the mucous discharge, which is constantly running over the breach of continuity, is the cause why these injuries are so very difficult to heal. I would recommend in such cases that the patient be kept as much in the prone position as possible, and that a wide slip of lint, well smeared with bals. copaib. be placed carefully over the whole of the laceration. From what I have seen in slight cases, I have but little doubt that it would succeed in those of greater extent."—*Lond. Med. Rep. and Rev. May,* 1828.

94. *Assistance afforded by the Stethoscope in Doubtful Pregnancies.*—Our readers are already acquainted with the interesting and important discovery of M. Kergaradec, of Paris, of the unequivocal signs furnished by the stethoscope of some cases of otherwise doubtful pregnancy. Dr. **Probart** relates, in the *London Medical Repository and Review* for May last, three cases in which he detected pregnancy by the stethoscope. The first case was that of a maid servant, who had not menstruated for five months, having, she believed, taken cold the last time she was unwell. She complained of pain and swelling in the hypogastric region; her bowels were costive; she had no appetite, and felt no general uneasiness. The hypogastrium, felt through the dress, was tense and unyielding, and the patient affirmed that very slight pressure occasioned her considerable pain. Dr. Probart suspected pregnancy, but she denied the possibility; on examination, however, with the stethoscope, the "*bruit placentaire,*" was instantly detected about midway between the umbilicus and superior anterior spinous process of the ilium; and between the former and the pubis, the heart's contraction in the fœtus, beating in frequency double that of the mother. The girl still denied she was pregnant, but on being remonstrated with, acknowledged she had "kept company" with a man-servant in the house. She was shortly after delivered.

The second case was that of a married woman of emaciated appearance, the mother already of two children, who consulted Dr. P. on the state of her health, which another gentleman in the profession had represented as hopeless, from an opinion that she was "in a deep decline." There were considerable difficulty of breathing, some cough, occasional perspirations and debility. By means of the stethoscope, however, Dr. P. found the lungs healthy, but the heart was beating with a vastly augmented sound, and audible all over the chest, as well posteriorly as anteriorly, but unaccompanied by any preternatural impulse. Dr. P. concluded, therefore, that the above symptoms were the consequences of simple dilatation of the heart, and a suitable treatment was adopted, from which the poor woman derived so much relief, that she believed herself cured. She very soon again became alarmed at a gradual increase in the size of her belly, which her neighbours persuaded her arose from dropsy; and she, therefore, again presented herself to Dr. P. Being engaged at the time with other patients, he did not enter into a minute inquiry; and, taking it for granted that there was effusion, a natural sequela of the affection of the heart, he prescribed a combination of aperients and diuretics. Her size still increasing, she determined to pay him another visit; and, now doubting the accuracy of his former hasty diagnosis, as to the effusion, he auscultated the abdomen, and in a few minutes discovered the sounds of a fœtal circulation. Willing as this person evidently was to believe the information he now communicated, she could not be convinced of the fact, as she had not felt the motion of the child, nor had experienced any of those sensations that marked her former pregnancies. Before her confinement, however, which happened about ten weeks subsequently, she was satisfied of its truth, and had made the usual preparations.

Case III.—"A young woman was admitted under my care, into the Suffolk Hospital, supposed to have ovarian dropsy. In the hurry attendant upon admitting patients I made no examination at the moment, but desired the woman to remain in bed the following morning until I had made my visit, with a view to more accurate observation. The account given of herself was, that she had suffered with her present complaints for two years, during which time she had been severally treated by a physician and two surgeons. There was apparent tenderness in the hypogastric region, upon slight pressure; and a spherical tumour was very palpable, extending from the pubis to the umbilicus, which so very nearly resembled the pregnant uterus about the seventh month, that I, without hesitation, put the question as to the possibility of pregnancy. The girl gave me the most solemn assurances it could not be, and said that, in consequence of her appearance, she had more than once in the course of the last two years been so charged by her neighbours; and that so lately as only a fortnight ago, this report having again spread through the village, she, for the satisfaction of her mother and friends, submitted to an examination by the medical gentleman who attended the parish, and who then declared that she was not pregnant. Still, however, very doubtful of all this, I had recourse to the '*Experimentum crucis,*' when my suspicions were immediately realized in the existence of a loud '*bruit placentaire,*' with that still less equivocal sign, the action of a fœtal heart. The girl, notwithstanding the positive manner in which I now insisted upon her situation, persevered for a long time in affirming her innocence; but ultimately she acknowledged 'an acquaintance' with a young man in the village: she was nevertheless sceptical on the score of pregnancy, as she continued to feel exactly as she had done for two years back. Her mother called at my house the next day, before going to see her daughter at the hospital, to hear my opinion of the latter, and manifested a disposition to quarrel with me on hearing the unwelcome tidings I communicated. The patient returned home with her mother, and was, a month after, delivered of a still-born child.

"There cannot, I think, be any doubt that the subject of this example was ignorant of her situation; for it is quite true that she had been ailing for two years; that she had menstruated but once during that time, which event appears to have happened a short time before the 'acquaintance,' and that the apothecary had declared her case not to be one of pregnancy."

MEDICAL JURISPRUDENCE.

95. *Case of Poisoning by the Milk of a Poisoned Animal.*—"An old woman sold goat's milk, the produce of two goats, an old and a young one, to many of the inhabitants of Aurillac. On the 13th of July, 1827, sixteen persons, soon after having drunk some of this milk, suffered acute pains in the stomach, with nausea, and general distress and uneasiness: in some of the individuals the epigastric pains were very intense, they vomited porraceous and bloody matter; these symptoms were soon followed by violent head-ache, lassitude, pains and cramp in the extremities, with all the symptoms of cholera morbus. A mild plan of treatment, consisting of emollient and mucilaginous drinks, succeeded in restoring all the patients in twenty-four hours.

"On inquiring into the state of the two animals, it was found that the old goat had drunk some sour broth, which had been left in a copper vessel on the 12th. On the 14th it refused to eat; it tottered in its gait, and a thick and viscid saliva flowed from its mouth; the abdomen became tumid and painful; the pulse small. These symptoms increased, and the poor creature died on the 16th. On opening the body, the small intestines appeared to have undergone violent inflammation.—The young goat had not drunk any of the broth, and was in good health."—*Journal Général de Médecine, Nov.* 1827.

96. *Presumed Violation of a Child.*—The following question was submitted to the Faculté de Médecine, by the legal authorities:—Whether it was possible for an infant of fourteen months old to be violated? "Their opinion was also requested upon the facts stated by a pupil of the Hôpital Beaujon, who reported that "the hymen was torn, and that it appeared to have been recently ruptured." As, in a legal point of view, any forcible attempt to perpetrate such a crime is as criminal as its consummation, the faculty confined themselves to one point of inquiry, namely, to ascertain whether the appearances of the organs of generation justified the suspicion that violence had been inflicted. The certificate of the surgeon who first examined the infant stated that the hymen was ruptured, that the rupture *appeared* to be recent, and that the labia *appeared* to be inflamed. The commissioners observe, that every year, particu-

larly during cold and damp weather, female infants are taken to the hospital with a purulent, and sometimes bloody discharge from the vagina, accompanied by tumefaction of the parts, ecchymosis of the labia, and "solution de continuité de l'hymen." The children in this state are usually feverish, and out of health in other respects. Many of these little patients have been presented at the consultations under the impression that some improper violence had been inflicted. But a variety of circumstances tended to prove that there was no foundation for such suspicions. Several of the infants were still at the breast, and had never been left by their mothers; and the number of such cases appeared to prove the existence of some general cause which had acted simultaneously upon many different children.

"In reference to the facts stated in the certificate, it was observed that the hymen may be ruptured in many different ways, and that it cannot be determined by any examination *how* the rupture has been caused. The inflammatory symptoms, ecchymosis of the labia, and discharge from the vagina, cannot without some collateral evidence, be asserted to arise from any criminal attempt. The report from the Faculté de Médecine, therefore, merely certified that the child laboured under a 'catarrh' of the external genital organs. They did not venture to give any opinion as to the cause of the complaint.

"In more than one instance we have known much anxiety excited by the appearance of symptoms in young female children, resembling mild gonorrhœa. The brief relation of a case which occurred a short time ago in our own practice, will show the necessity for much caution on the part of the practitioner. A girl, nine years of age, was attacked with the symptoms above enumerated: discharge from the vagina, swelling of the labia, and inflammation of the parts. In this state she was presented to a very young surgeon, who injudiciously declared that the child must have been the subject of some improper violence. She was repeatedly and severely questioned by her mother, and at length an accusation was extorted from her against a young man residing in the same house. He fortunately, however, was known to have been absent on the particular days mentioned by the child. Being still urged by her mother, she afterwards told the same story of two or three other men; and, when we questioned her upon the subject, she confessed that no part of her story was true, but that she believed her mother 'wanted her to find out somebody.'

"We were consulted in a similar case some years ago, in which a criminal prosecution was about to be commenced against a man upon very slender suspicion. In this instance the child had afterwards frequent attacks of the same kind at very distant intervals. Cooling lotions and mild aperients have always succeeded in removing the inflammation and discharge."—*Lond. Med. and Phys. Journ. May,* 1828, *from the Repertoire d'Anatomie, Tom. IV. No.* 4.

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97. *Death caused by the external application of Opium.*—The application of opium in large quantities to the skin, when deprived of its cuticle, is a practice by no means free from danger. An instance is related in the *Edinburgh Medical and Surgical Journal for April,* 1828, in which deep coma was induced by the application of an opium poultice to the scrotum, previously deprived of the cuticle by a blister, and which would in all likelihood have proved fatal, had not one of the patient's friends called accidentally to see him, and discovered the cause of his state of sopor. In the *Journal de Chimie Medicale for April,* 1827, a case is recorded which proved fatal, although the skin was not deprived of its cuticle. A soldier, thirty-two years of age, was attacked with phlegmonous erysipelas of the fore and outer part of the right leg, on account of which a linseed poultice, moistened with *fifteen drops* of laudanum, was ordered to be applied to the limb. Next morning he was found in a state of deep sopor, with the face pale, the eyelids tremulous and half open, the pupils contracted, the lips distorted, the muscles of the face affected with spasm, and those of the limbs with convulsions. The surgeon having remarked a strong odour of opium, as well as a yellow coloration of the bandage which enveloped the limb, he had it removed, and

found not only the bandage but all the compresses soaked with laudanum. which was flowing copiously from the poultice. The attendant whose duty it was to make up the poultice, had left it in charge to an hospital servant without telling him what quanitity of laudanum was to be used, and the latter had ignorantly used about an ounce. Antispasmodics, emetics, and sinapisms, were resorted to but in vain. The convulsions increased, the pulse became more and more feeble, and the patient died. On inspection some red points were seen on the arachnoid, a strong opiate odour was exhaled from all parts, and the heart, stomach, and brain were in their healthy state. In the blood-vessels no trace could be found of the poison which had been absorbed.

98. *Cases of Poisoning by Belladonna.*—Two children ate a considerable quantity of the berries of the *Atropa Belladonna.* "The elder of the two on going to school immediately afterwards, burst out into immoderate and incontrollable fits of laughter, and constantly caught at objects which he conceived were before him. Subsequently was added to these symptoms an incessant, incoherent babble, with continual agitation of the body, fixed eyes, dilated and insensible pupils. This was above three hours after the berries had been taken. The physician who then saw him for the first time, administered an emetic, which brought away a large quantity of reddish matter containing fragments of the berries. After this tartar emetic was given, though not without great difficulty, as the lower jaw was spasmodically contracted. Notwithstanding repeated vomiting the symptoms went on increasing, the limbs were in constant agitation, the breathing high and croupy, the face red, and the incoherence constant. Purgatives were then administered, and afterwards vinegar. Four hours after the poison was swallowed the breathing had become stertorous, the skin cold, the face bloated, the pulse imperceptible. The child was then immersed in the warm-bath, and bled from the jugular vein to the extent of six ounces, with marked advantage. The muscular agitation was now broken by intermissions of profound sleep, in which, however, the patient was not permitted to indulge for twelve hours more. Next morning, (nineteen hours,) calomel was administered and caused several evacuations. In the afternoon the pulse again became almost imperceptible, the skin cold and pallid, and the warm-bath was therefore repeated and followed up by sinapisms and assafœtida injections, in consequence of which the pulse and temperature were restored. Four hours afterwards these symptoms recurred, and were again successfully combated by the same means. An hour and a half after that, or twenty-nine hours and a half after the berries were eat, the whole symptoms were much abated, and the child was sensible. From this time the amendment was rapid. But it was not till the third day that he could distinguish objects. Till then he was entirely deprived of sight: even a lighted candle held close to the eyes did not seem to make the slightest impression on the retina. For some time afterwards he was in indifferent health; and had occasional fits of slight convulsions; but he ultimately got quite well. The circumstances of the other case were precisely the same in every respect."—*Journal de Chimie Médicale, December*, 1827.

CHEMISTRY.

99. *On the Active Principle of Hemlock, (Conium Maculatum.)*—According to MM. Brandes and Gische, the best method of obtaining this vegeto-alkali, consists in digesting the fresh plant for several days in alcohol, filtering and evaporating the liquid, mixing the residue with water, and acting either by alumina, magnesia, or the oxide of lead; the whole is then to be evaporated to dryness, and the substance obtained acted upon by a mixture of alcohol and ether; the solution being evaporated to dryness, yields the principle now distinguished by the name conin, (conia.) This principle is said to possess de-

cided alkaline properties; its aqueous solution forms an abundant red precipitate with tincture of iodine. Half a grain of the substance will kill a rabbit, the symptoms being the same as those produced by strychnia.—*Bull. Univ. C. XII.* 253.

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100. *On the nature of Labarraque's Disinfecting Soda Liquid.* From the researches of Mr. Faraday, it appears Labarraque's disinfecting liquid contains a peculiar compound of chlorine, carbonic acid, and soda, the two latter being in the same proportion as in the common carbonate. Carbonic acid gas may be transmitted in large quantity through the solution without carrying off the chlorine; but stronger acids displace it readily. The chlorine is also displaced by the force of crystallization. The compound resists the action of boiling; not only is chlorine not disengaged, but very little chloric acid is generated. The liquid deteriorates, however, by keeping. In a portion of it kept in a well-stopped bottle for six weeks during summer, reaction was proved to have taken place between the alkali and the chlorine, some of the chlorate of soda and chloride of sodium having been formed.—*Journal of Science for July,* 1827.

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101. *Preparation of Sulphate of Quinia, and Kinic Acid, without the use of Alcohol.*—" The following is the process of MM. Henry and Plisson. About two pounds of bark are to be coarsely powdered and boiled with water, acidulated with sulphuric acid in the usual manner. When the hot liquors are cleared, recently prepared, and moist hydrate of lead is to be added until the fluid is neutral, and has acquired a faint yellow colour; this must be done carefully, lest two much hydrate of lead be added. As the decolouration of the decoction is necessary, the liquid, if it remains turbid until the next morning, must have a little more hydrate added, and be re-filtered; but the operation is rarely subject to this inconvenience, being usually finished in a few hours. The yellow liquid contains a little kinate of lead, much kinate of lime, kinate of quinia or cinchonia, a little colouring matter, and traces of other substances. The washed deposite consists of colouring matter, combined with oxide of lead, sulphate of lead, and a portion of free quinia; and contains no sub-kinate of lead.

" The lead, dissolved in the fluid, is to be separated by a few drops of sulphuric acid, or a small current of sulphuretted hydrogen, and the filtered liquid is to be precipitated by adding caustic lime, previously mixed into a thin paste with water, until the earth is in very slight excess; in this manner the quinia is precipitated. The addition of sulphuric acid readily converts this quinia into sulphate, which may be obtained in very white and silky crystals. The fluid left after the separation of the quinia contains a kinate of lime almost pure. Being evaporated until of the consistence of syrup, it readily crystallizes in a mass, which may then be purified by recrystallization. The kinate of lime may be precipitated by means of alcohol, and then be crystallized after solution in water or diluted alcohol; or by adding oxalic acid drop by drop, according to the directions of M. Vauquelin, the lime may be separated, and kinic acid obtained. Two-thirds of the quinia or cinchonia in a specimen of bark may be thus separated, and with such facility as to offer a ready test of the presence of these alkalies in any wood or bark submitted to examination."—*Ann. de Chimie,* xxxv. 166.

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102. *Sulphur in Assafœtida.*—M. Zeise has discovered the existence of sulphur in assafœtida. The following are the principal experiments by which he has ascertained this fact. If assafœtida is treated with liquid caustic potash, and an acid is added to the solution, an effervescence takes place, and a gas is disengaged which blackens paper moistened with acetate of lead. If a solution of assafœtida in alcohol be evaporated to dryness, and nitro-muriatic acid, (aqua regia,) be poured upon the residuum, a liquid is obtained which contains sulphuric acid. If pure volatile oil of assafœtida is burnt, a very strong odour of sulphurous acid is given out. The same oil heated, till inflamed, with potash,

leaves a mixture of carbon and sulphuret of potash. M. Zeise thinks that sulphur will be found in many other organic substances.—*Journal des Progrès, Vol. VIII.* 1828.

MISCELLANEOUS.

103. *Vaccine Disease.*—M. **Prela**, physician to the Pope, has very plausibly shown, (in a treatise entitled Il Boa di Plinio congettura su la Storia della Vaccinazione. Milano, 1825,) particularly by passages from Pliny and Celsus, that the vaccine was known to the ancients under the name boa, to designate its origin from the cow, and upon this has founded the ingenious hypothesis, that from this boa, the small-pox, by the influence of human organization, has by degrees been developed, so that its removal by means of the cow-pox is to be considered merely as a return to its source.—*Hufeland and Osann's Journal der pract. Heilkunde, February*, 1826.

104. *On Foreign Substances in different parts of the Body.* By **Charles Bell**.—"A farmer's wife, with her gossip, came to me, describing the great distress she had suffered in coming up to town from being unable to sit. She proceeded to describe an excessive pain and pricking in her hip near the labium. When I had prevailed upon her to allow me to examine this, I found an abscess pointing, and I thought something like a foreign body within it. I opened this with the lancet, and struck on something hard; and having got hold of it with the forceps, I drew it out. My surprise was very great to find it was a piece of a comb, but nothing to that of the poor woman, who was quite speechless with amazement. She could give no account of the manner of its coming there; indeed the talkativeness of the two good ladies ceased altogether, and they seemed very desirous to depart. The surgeon who attended her in the country, wrote me some time after that he had extracted another portion of the comb. That which I took out consisted of four of the coarse teeth of a dressing-comb.

"It is not uncommon for bones to be arrested in the rectum, causing great irritation above the sphincter; and these I have known make their way to the hip. A bone sticking above the sphincter, obstructing the course of the canal, causing great pain and irritation, has been mistaken for cancer in the rectum; and the patient has been relieved from great suffering and the apprehension of death, by the extraction of such a bone. I attended a physician from India, Dr. M. with scirrho-contracted rectum. In the course of the disease his symptoms became suddenly aggravated. The cause at length disclosed itself in a phlegmonous tumour forming upon the point of the hip. When I opened this, there were discharged from it as many bones of small birds as would lie on the palm of the hand. But unfortunately these bones had not been the cause of the disease in the rectum: they had only been retained above the scirrhous contraction, until by inflammation and suppuration they had made their way through the cellular texture to the hip. Such circumstances teach us the propriety of passing a sound through the stricture when there is any great aggravation of symptoms. I may notice that such things sticking in the rectum produce great irritation in the bladder. Colonel G. had consulted me on account of a stricture in the urethra. I found none, and attributed his symptoms to intestinal irritation. (See his case, p. 74, of my Treatise on the Diseases of the Urethra.) That gentleman, while on a coasting voyage in India, which he undertook on account of his health, had a large fish-hook extracted from his rectum, which I have no doubt had been the cause of the irritation of his bladder."—*London Medical Gazette, Vol. I. No. 7.*

AMERICAN INTELLIGENCE.

A Case of Rheumatism with Metastasis, producing Carditis, Pericarditis, Peripneumonia, and Pleuritis. By W. P. Dewees, M. D.—A. B. aged eight years, of a delicate habit, began on the 16th November, 1827, to complain of a cold; that is, she had a slight sore throat, cough, and a general soreness over the body. She was dieted, and took a dose of castor oil by the direction of her mother. 17*th.*—She remained pretty much the same. 18*th.*—Her feet and hands were observed to swell, and were very slightly inflamed; though not painful they were sore to the touch. 19*th.*—The first day of my visiting her. She complains of a severe pain in her right groin; a small tumour is observed here; the soreness of this part excessive. Purged with calomel and magnesia, and the part bathed with warm sweet oil. 20*th.*—The pain and soreness of the groin much mitigated; but the chest is suffering from severe pain accompanied by great oppression. Was blooded; the blood very sizy. 21*st.*—All her symptoms much relieved. 22*d.*—Pain in the groin nearly gone; could bear the part touched, and move her limb without much suffering. In the evening I was sent for, but being engaged I requested my friend Dr. Hays to visit her for me. He found her sitting on her mother's lap, being unable to lie down. She complained of pain in the region of the heart, with difficulty of breathing. Her pulse was frequent, but not corded; the respiration was short, pain being experienced when an attempt was made to draw down the diaphragm. A metastasis of the disease having evidently taken place to the heart and diaphragm, revulsives were ordered with the hope of relieving these parts. A large sinapism was applied over the chest, which afforded prompt relief, and on my visit the next morning I found her free from pain. During that and the two succeeding days, she improved so much as to be able to be about; and nothing but a little debility seemed to remain. But on the twenty-fifth, she exposed herself several times, by walking, without additional covering, through a long, cold entry, by the ill-directed advice of the servant in whose charge she was left for a few hours; the consequence was, that on Monday the twenty-sixth, she was attacked with a severe pain at the extremity of the xiphoid cartilage, accompanied by great distress in respiration, and total inability to lie down. I ordered a sinapism applied over the pained part, which very promptly relieved her. 27*th.*—Her stomach much harassed by sickness and vomiting; the groin free from pain as was the part upon which the sinapism was applied yesterday. After the stomach had continued for an hour or two in the situation just stated, it would suddenly be reconciled, and the top of the left shoulder would now be the seat of excruciating pain, which in turn would become easy by a return of the disease to the stomach, which would now be sick as before; or the pain would fix itself in the left side near the margin of the false ribs; and thus the affection would alternate a number of times in the twenty-four hours. 28*th.* Stomach very sick, with some difficulty of breathing. In the after-part of the day, these symptoms became very much more severe; so much so indeed, that there was now violent and frequent vomiting. A white tenacious mucus in considerable quantity was eventually thrown up, which at the moment afforded great relief. I was present at this time; and from the great abatement of her distress, I indulged a hope it would be permanent; but in about an hour after I had left her apparently much improved, I was suddenly called to her, and before I could reach the house, she was a corpse.

During the whole progress of this disease, the arterial system was but little affected, the pulse, with the exception of the last day, was neither frequent nor tense;

yet it bore evacuations remarkably well, as far as they were pursued. Bleeding, leeching, and purging were in turn ordered: as were, with some vigour, blistering and the repeated application of rubefacients.

The cough, which attended through the whole course of the complaint, was always found to be augmented whenever the chest became the seat of attack. Expectoration was difficult, requiring numerous efforts to bring up a small quantity of white tenacious mucus; but this little always appeared to afford some relief.

It was truly astonishing to see with what suddenness the disease would shift its seat, and with what severity it would affect the part to which it would translate itself. When the stomach became the seat, it would instantly produce violent sickness, and sometimes pretty severe vomiting, which would continue for several hours. After this, it might in an instant be transported to the diaphragm, lungs, or pleura. When here, she would experience severe pain, great difficulty of breathing, and almost incessant coughing, and an inability to lie down.

From these parts it would return to the stomach, attended by the usual consequences of extreme sickness, or distressing vomiting; or, more fortunately, it might take its flight to the point of the shoulder, where it would tarry the longest, and of course with the lesser inconvenience. On the twenty-eighth, it attacked the stomach with unusual violence; and after the severe vomiting mentioned above, it seized upon the heart, and death almost instantly followed. For after it had left the stomach, she desired to be seated upon her mother's lap, where she had not been more than five minutes, before she shrieked violently from pain seated in the region of the heart; she stiffened all her limbs by a sudden effort, and in a moment died.

It is worthy of remark that the child's parents are both sufferers from rheumatism, and that she had several times before been attacked with the disease; and also that eighteen months before her death she had had chorea Sancti Viti, which continued for three or four months, and was cured by the repeated administration of purgatives, principally cremor tartar and jalap in combination.

I am indebted to Dr. Horner for the following account of the post mortem examination.

Autopsy, thirty-eight hours after death, in the presence of her physicians, Drs. Dewees and Hays.

Exterior aspect.—Colour as usual after death; no great marasmus; pupils dilated; expression of countenance tranquil.

Head.—Membranes of brain natural; cerebrum natural; cerebellum somewhat softer than usual; not a drop of water in ventricles of brain.

Medulla Spinalis.—Membranes natural; it seemed harder than usual, and its elasticity was so considerable that it would suffer an extension of two inches, followed immediately by an equivalent contraction. The rugæ on its surface very perceptible. Its elasticity was independent of the dura mater, for it continued the same when the latter was slit up both before and behind. The dura mater contained about two drachms of fluid, one half of which was blood, and the other the serum peculiar to this cavity. The upper and the lower enlargements of the medulla spinalis, (renflements,) where the nerves of the upper and of the lower extremities come off were unusually developed.

Thorax.—Heart twice as large as usual, and adhering by a thick coat of lymph to the pericardium, excepting a small extent of the right ventricle, and the whole of the right auricle. Two ounces of straw-coloured serum in pericardium. The texture of the heart was sensibly altered; its parietes being almost universally thickened; of a light colour, about that of veal flesh; so rigid as not to collapse after the manner of healthy hearts upon the evacuation of its contents; and cutting in the crispy semi-cartilaginous manner peculiar to inflamed muscles. I did not detect any inflammation of its lining membrane; the right cavities contained coagula of red blood.

The left pectoralis major muscle had been the seat of pain; it was found not altered in colour, but the texture had undergone the same pathological change with that of the heart. The pleura of the region behind it had some filaments of coagulating lymph passing between it and the corresponding surface of the lung. The whole circumference of the pleura on both sides of the body had lost the smooth shining condition of the normal state, presented here and there specks and pellicles of lymph, and was slightly turbid. Each cavity contained about two ounces of a straw-coloured, transparent serum.

The thymus gland was natural, being about the size of early infancy.

The right lung was heavy, fleshy, and had lost one-half of its spongy character; the blood being infiltrated into the cellular substance, and identified with the organ. The left lung was also partially solidified with blood, but by no means to so high a degree as the right, for its spongy character still predominated: it was pushed to the back of the thorax by the augmented heart.

Abdomen.—Peritoneal surface universally healthy.

Stomach.—Of a pink-colour on its mucous membrane, especially along the ridges and sides of the rugæ, being two or three degrees lighter than Mr. W. Jones's, reported in No. I. of this Journal. It seemed entirely healthy, and had abundant rugæ.

Small Intestines.—Duodenum healthy; the jejunum and ileum in the greater part of their extent were reddened by a turgid state of the capillary veins, but there was neither ulceration, ecchymosis, or thickening; they were smeared with mucus, and had some appearance of irritation, but possibly the latter might have arisen solely from retrograde congestion, by the arrest of the circulation at the heart. The congested state of the lungs would favour the opinion, but in that case one would infer that the stomach also should have been congested with venous blood, which was not the fact.

Large Intestines.—Spasmodically contracted, and contained only mucus.

Liver.—Peritoneal coat somewhat turbid, a little thicker than natural, and abounding in large distinct absorbents; granular substance, (acini,) not so distinct as usual, hard, cohering strongly, and somewhat intermixed with that resisting yellowish matter, constituting what has been called the fat liver.* Had this state of the liver a connexion with the chorea, or with the long course of purging instituted for the cure of the latter?

Gall-Bladder.—Contained a yellowish, thin mucus; cellular coat increased to three lines in thickness by the infiltration of a gelatiniform fluid.

Spleen healthy. Kidnies not examined.

Case of Puerperal Peritonitis successfully treated with Mercurial Frictions, and Turpentine internally administered. By W. P. Dewees, M. D. &c.—M. Velpeau has recently recommended frictions with mercurial ointment, as a remedy in puerperal peritonitis, and he relates several very interesting cases in which he employed them, apparently with advantage. The mode of employing it is:—

First, To have the whole abdomen smeared with from two to four drachms of the unguent every two, three, or four hours. Second, If the pain and swelling of the abdomen, and especially if the mouth betray any mark of the influence of the mercury upon it, to diminish the quantity to one or two drachms, and to make the intervals of application longer. Third, To wash off, with warm water and soap, or with sweet oil, the crust which the ointment forms upon the skin, that in its future application it may be more certainly placed in contact with the skin. Fourth, To continue the ointment, if circumstances warrant it, (that is, if the patient live long enough, or if her system be obedient to its influence,) until either signs of salivation show themselves, or until such amendment takes place as shall render further perseverance unnecessary.

The following very interesting case has lately presented itself, in which the mercurial ointment was very liberally used: but I should be very unwilling to decide upon the extent of the agency it had, in the recovery of the patient, as another celebrated remedy was employed simultaneously with it; namely, the spirit of turpentine.

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* Having once tried it by experimenting, I am of opinion that this matter is not adipose, but a modification of coagulating lymph.

I was requested by Dr. Mitchell to visit Mrs. ——, who was very ill with puerperal fever. This patient had been delivered safely by the doctor of her first child, and nothing alarming presented itself until the second day. Milk had been freely secreted, and there was every promise of a good "getting up," until the beginning of the third. At this time she was attacked with a pretty severe chill, which was followed by great heat, thirst, tenderness of the abdomen, and a very frequent pulse.

She was bled, purged, leeched, and blistered on the abdomen, and kept upon a strict antiphlogistic regimen, &c. before I saw her. There was such an appearance of amendment for two or three days after this time, that scarcely a fear was felt, but that she would surmount her disease; but the expectations so fondly indulged in, in the morning, were entirely destroyed in the evening, by finding our patient with a cold clammy skin; a pulse scarcely to be numbered, very small, nay, almost extinct; breathing short, very frequent, and rather laborious; the alæ nasi expanding and contracting with great frequency; the stomach rejecting every thing offered to it; the lips dark and dry; the milk entirely gone; slight mental alienation, though not amounting to delirium; the abdomen excessively distended and tympanitic; the feet and legs cold; extreme fœtor of the lochia, which were small in quantity, and very dark: in a word, so certainly did we look upon her being in articulo mortis, that no appointment was made for a visit next morning.

Notwithstanding, however, these unfavourable appearances, Dr. M. and myself thought it a duty to do every thing that lay in our power—accordingly thirty drops of the spirit of turpentine were ordered to be given every hour; an ounce of strong mercurial ointment was directed to be rubbed on the abdomen during the night, sinipisms were ordered to the feet and legs, and an enema of sixty drops of laudanum and a gill of warm water was to be thrown up the rectum.

The next morning Dr. M. favoured me with a call, as had been agreed upon the evening before, provided he found the patient alive. And I honestly confess, I was much surprised when he reported our patient to be rather better than we had left her in the evening. Upon visiting her, this was found to be the case. The skin and extremities were warm; the pulse more expanded and considerably less frequent; the breathing more natural; the countenance more composed; the mind more upon the alert; the vomiting and nausea greatly subdued; the abdomen rather less tender. The ointment was to be continued, as well as the turpentine; of the latter she complained, as creating a disagreeable heat in the stomach. To remedy this, a tea-spoonful of sweet oil was directed to follow in fifteen minutes, each dose of the turpentine, which effectually removed this inconvenience.

Barley water and very thin sago were directed as drink and nourishment; also the juice of sweet oranges, which proved very refreshing. The remedies were ordered to be continued in the evening. On the morning following, there was so much amendment, that the turpentine was discontinued; the pulse was still too frequent, but the abdomen was less swelled, much softened, and very much less tender. The ointment, however, was again applied. From this time she improved hourly, and had eventually a rapid convalescence.

During the whole treatment, it may be proper to observe, that a solution of gum arabic was her chief food and drink; and that at no time were internal stimulants, if we except the turpentine, for an instant employed.

I have since been informed by Dr. M. that four or five days after I had taken my leave of this patient, that upon her complaining of some pain in her bowels, the nurse, (a new one,) gave her some brandy to relieve it; this immediately exasperated the pain and re-excited fever. She was under the necessity of losing twelve ounces of blood, and to be purged, which soon relieved the pain and fever; she recovered soon after this, without further interruption.

It may be as important, as it is interesting, to state, that after an entire cessation of the milk, for two weeks, it was restored, and continues sufficient to nourish the child; this was effected by the persevering application of the child to the breast.

Account of the Disease called Dengue, which has prevailed so extensively at Havanna. By G. F. Lehman, M. D. Lazaretto Physician to the Port of Philadelphia. (Communicated to the Board of Health.)—In answer to the resolution of the Board of last evening, requesting my opinion of the nature of the disease with which the men of the ship Columbia are affected, I respectfully communicate the following facts.

Henry Allen, seaman, had, while in Havanna, the disease called by the natives Dengue, from which he entirely recovered upon warm lemonade. He continued in good health until the 20th of June, when he was seized with a high fever, and pains in all his bones, the violence of which, particularly in his head and back, was almost insupportable; a dose of calomel and jalap was administered to him, which had no effect. In three days the violence of the affection was over. He is now very weak, depressed in his spirits, has pains in his bones, and no appetite, but without any fever. I consider him, therefore, at present, as labouring under the effects of Dengue.

William M'Elwee, the blacksmith, was taken sick June 19th of a violent fever, excruciating pains in his back and head, and severe vomiting. He had alternate flushes of heat and cold shiverings, with a burning redness over the whole body. In a few days the cuticle desquamated. He now complains of pain in his joints, slight headache, and occasional nausea. He took no medicine, but drank freely of warm lemonade. This may be put down as a case of Dengue.

James Simpson, seaman, states, that in the morning of June 30th he had a chill while aloft—the next morning he felt well again. On the night of July 1st he was seized by severe pains in his back and head, and thought he was dying. Yesterday morning I saw him. He had, in addition to the pains, considerable fever, with a furred tongue, and a bright redness over the body. To day he is better.[*]

From the conversations I have had with the passengers of the brig Pomona, some of whom have resided many years in Havanna, and one of them had sixteen cases of Dengue in his own family, I am led to believe that the disease of the men of the ship Columbia is the same. It varies occasionally in all its symptoms, excepting the pains in the bones, which exist in all cases. The facts in support of my conclusions are now all before you.

Two of these men have been sick before, and the other predisposed to the disease, which was probably excited into operation, by exposure to tempestuous and wet weather here.

This disease, which appears to be a variety of bilious fever, depends no doubt on the extraordinary weather experienced for some months past on the Island of Cuba. No rain has fallen for six months, and the drought is severe beyond all recollection. When the rains begin to fall, the disease will no doubt alter its complexion, and assume a different type.

Lazaretto, July 3d, 1828.

I enclose a few additional remarks on the disease called dengue, now prevailing in the Havanna, on the Island of Cuba, and a history of several cases taken down as they were delivered to me by the individuals affected. These, with the history of the cases already given, embrace all my present information on the subject. My experience in this disease has been limited. With the exception of the cases now in the hospital, an account of which I imparted some days ago, I know nothing personally.

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[*] James Simpson was perfectly well on the 7th inst. but in consequence of running about too much at night, and exposing himself to the very heavy dews prevailing here, he had a relapse, with all his original symptoms, but not quite so violent. A moderate dose of castor oil with warm balm tea removed the complaint in forty-eight hours, and he is now (July 11th,) convalescent.

Second attacks, or more properly speaking, perhaps relapses, are very common.

The facts about to be presented, are mainly derived from loose and desultory conversations with a few passing travellers, totally unacquainted with the science of medicine. I have seen no medical man familiar with the disease, nor one indeed, who has ever witnessed it.

These prefatory notes are offered, not only to restrain confidence, but more especially as an apology for the circumscribed statement I am prepared to give you, appertaining this novel affection, which, in its present shape, has never appeared on our shores. An inclination, however, to comply with the request of the board, impels me to transmit the scattered facts, which have from several sources fallen under my notice.

I have found some difficulty in obtaining a definite signification of the word Dengue or Dunga. It is a vulgar phrase, and implies a "staggering weakness," and is somewhat similar in its import to our term of "Corned," as applied to a man reeling about from intoxication.

The population of Havanna, is about one hundred and sixty thousand, including the city and suburbs. Of these it is estimated, that from fifty to sixty thousand have had an attack of Dengue. When the disease first appeared, and its character unknown, some, to allay the violent fever, resorted to venesection and strong purgatives. In every instance where this was done, the patient's life was the sacrifice. It was soon discovered that the disease would not bear depletion, and that simple diaphoretics succeeded best; but I am in advance of my subject.

The last winter of Havanna was distinguished for its warmth and dryness, and sickness was very prevalent. The winds were north-west, south-west, and dry. No rain of any account has fallen for six months.

About the last of April, or beginning of May, the Dengue first attracted public attention. It spread with wonderful rapidity among the citizens and crews in the harbour. From fifty to sixty thousand of the citizens had the disease in the course of six weeks. Out of Mr. Vinas' family, (a passenger of the brig Pomona,) consisting of eighteen, sixteen had the disease, and the two who escaped were negroes. Strangers and natives are equally affected.

The opinions of the physicians of Havanna, regarding its nature, I have been told are various. While some consider it a scarlet fever, others look upon it as a misplaced influenza; but they are unanimous in giving it an atmospheric origin. To me this appears certain. No disease depending solely upon contagion, or communicated from body to body, ever attacked so large a number in so short a period of time. At least, it is contrary to all the known laws, and the usual progress of all acknowledged and uncontroverted contagions.

The influence of the atmosphere and state of the winds in the generation of disease, is admitted by every authority; but the manner of its operation, and the causes of this morbid influence are not so well understood. Every one knows that a moist, close, and chill atmosphere will generate influenzas, catarrhs, and pleurisies, and a hot and moist one will very often give origin to the different forms of bilious fever; but why these effects follow is a mystery.

This epidemic then, as far as I can inform you, is atmospheric.

The person about to be affected, is usually attacked, (but not uniformly,) during the night, with a fever, pain in the head, back, and limbs, and a soreness of the muscles to the touch. Sometimes the head alone suffers from pain; occasionally the severity is in the lower extremities, and indeed every part of the body is affected; but generally the head, back, and limbs are more or less disordered together. The first sensation of pain that Mrs. Vinas felt was in her wrist. Mr. Melizet, (a passenger of the brig Ponoma,) was warned of his attack by a pain in the corn on his little toe. Some are primarily affected in the extreme end of their fingers, and thus it varies in almost every case, but the disease advances, and falls on more important parts. From the violence of arterial excitement, delirium is no uncommon occurrence. At the expiration of three days, the morbid influence usually ceases, and the patient recovers with a voracious appetite, or a total loss of it for many days; the soreness of the joints and muscles continuing for some time, and eventually relieved by profuse perspiration. All are not attacked with equal severity. In many instances the disease is light, and terminates in forty or fifty hours.

Notwithstanding the pathology of Dengue is not clearly elucidated, the therapeutics is well understood, and depends almost exclusively in creating perspiration by the simplest means. It consists in administering to the patient large draughts of warm orange-water or lemonade, (the first is preferred,) occasional pediluvia, and an entire abstinence from all food, and warmth applied in some instances by a blanket thrown over the body. If costiveness prevails in the commencement of the disease a purgative medicine is given; and in its worst forms, when the brain is unduly excited, or delirium exists, cold vinegar, or vinegar and water, is applied to the head, and mustard cataplasms to the soles of the feet. This constitutes the whole treatment.

I was early aware that powerful remedial agents were improper, and prepared to treat any cases that might fall under my inspection agreeably to the Spanish plan. When the seamen of the ship Columbia were introduced into the hospital, I gave each of them half an ounce of castor oil, merely to open the primæ viæ, (neither of them had an alvine dejection for forty-eight hours preceding,) and then directed warm weak chamomile and balm tea to be drunk, repeated pediluviums, and a light regimen. Two of them are now well, the other was very much debilitated when landed, and from previous neglect seems to labour under visceral obstructions.

The mortality has been very small. Nearly all the deaths are attributed to mismanagement of the disease in its early attack, or great imprudence afterwards, in the patients themselves. I am credibly informed that even with this admission, not one death in five hundred cases has happened. An astonishing fact, and inapplicable to the lightest forms of disease prevailing among us at any season of the year.

The mortality, however, has been somewhat greater among the crews in the harbour. Seamen are usually careless and imprudent, and such an event should be expected. The deaths even there, have been comparatively small, and did not excite any strong sensation. The proportion of deaths in the harbour cannot be reached by any ascertained data, because ships are perpetually entering and leaving Havanna.

From its incipient symptoms, independent of other considerations, I am induced to consider Dengue as a bilious fever, modified by the prevailing weather of the island of Cuba, and particularly the dryness. It presents to be sure a new face, but some of the old features are so strongly marked that its identity is tolerably certain. This conclusion I wish you to understand, is founded particularly on the observation of those under my care, and if they correspond with all others in symptoms, &c. (of which my knowledge is from hearsay,) the inference is not far from the truth.

I shall conclude with a brief outline of a few cases. They agree, in general, with all the others I have heard of, and only differ in the violence of the attack or some unimportant symptom.

John Pleasants, passenger of the ship Hibernia, was sick in Havanna. He states that he was attacked about twelve o'clock at night with fever, pains in his head, back, and lower extremities. He took a dose of calomel and jalap, which operated copiously. Afterwards he drank warm orange-water—threw a blanket over him which produced a free perspiration. In a few days he was well. Slight pains in his joints, and soreness of the muscles to the touch, continued for a short period after his convalescence.

Captain Newton, of the brig Pomona, was seized about sunset with pains in the bones, and a little fever, with vomiting, which continued eight hours. The fever abated in twenty-four hours, but the pains continued for several days in the limbs. He drank orange-water cold, and took a dose of calomel and jalap, and several doses of oil during convalescence, and was nigh falling a sacrifice to the strong purgatives. His face and body were covered by red blotches.

Mr. Astley Punton, passenger of the ship Hibernia, was taken sick in Havanna, with pains in the head and fever, which continued thirty-six hours. He drank warm orange-water, and had mustard cataplasms to the soles of his feet. He recovered in a few days with an impaired appetite.

James Wetherly, carpenter of the ship Hibernia, had pain in the head, back, and limbs, nausea, but no vomiting; a dose of calomel and jalap was administered, and plenty of warm lemonade, and in three days he was well—covered with red blotches.

Pimples similar to the prickly heat, and red spots on the cuticle, were very common during convalescence.

Lazaretto, July 7th, 1828.

On the External Use of Tobacco in Croup. By **John D. Godman, M. D.**—During my residence in New York, where my children were very frequently attacked with severe and dangerous fits of croup, to which they had always been particularly liable, I was informed by my friend, Dr. F. **Vanderburgh**, of a very simple and efficacious method of arresting, at once, all the symptoms of this distressing and frequently fatal disease. Whenever children are threatened with an attack of cynanche trachealis, he directs a plaster covered with dry Scotch snuff, varying in size according to the age of the patient, to be applied directly across the top of the thorax, and retained there until all the symptoms disappear. He stated that he found the remedy to be always effectual when applied in the first or second stages of the malady.

This mode of treatment was from prejudice or scepticism neglected by me, and in one instance, in which, with very considerable difficulty, one of my children was rescued by the ordinary treatment. But on being again urged to make trial of the snuff plaster, I determined to make the experiment whenever opportunity presented. This was not long wanting, and when called to a child labouring under all the symptoms of the early stage of croup, such a plaster, (made by greasing a piece of linen, and covering it well with *Scotch* snuff,) was directed to be applied to the chest. The event was most happy; the symptoms of tracheal irritation and harsh crooping cough ceased shortly after, the child fell into a profound sleep with gentle perspiration, and by next morning was free from all distressing symptoms. The plaster was reapplied for a night or two following, and then discontinued, as the disease had entirely disappeared. Since that time my family have been saved from a great deal of anxiety and alarm, to which previously they were subject, as we were obliged to keep Coxe's hive syrup, tartar emetic, and all the other articles usually resorted to, constantly ready to meet the attacks of croup, which were very sudden and frequent in cold and wet seasons. Since then, we have found nothing necessary but the snuff plaster. If a child is heard to breathe hoarsely, or cough, with any thing of the dreaded ringing sound of croup, it is only necessary to apply the snuff plaster, and we feel under no farther anxiety. Instead of being obliged to watch with the child all the rest of the night, when once the snuff is applied, we go to rest again, with a feeling of entire security, which we have never had the least cause to regret.

The intelligent physician above-named, is in the practice of deriving great advantage from the external use of tobacco in various cases, in which it is by no means generally employed, if its use be even thought of. To allay the irritative cough arising from different diseased states of the lungs; in diseases accompanied with chronic spasm, and in the reduction of hernia, by direct application of tobacco to the hernial tumour, &c. Dr. Vanderburgh has used tobacco externally with very decided success.

In cases of croup the *Scotch snuff*, (which I believe is prepared from tobacco stems,) is to be preferred. My friend, Dr. **Pendleton**, of New York, informs me, he has tried other snuff without attaining his end, while with the *Scotch* the effect was certain. I publish this note with the hope that other physicians will give the treatment a fair trial, and report their experience. It has the advantage over the tobacco smoke, mentioned in the interesting notice of Professor Chapman, recently published,* that it may be kept always ready, and be applied in the dark, without loss of time. It has never caused vomiting, vertigo, or any other distressing symptom, in my experience, and this accords with the experience of both the physicians first mentioned in this note.

Case of Imperforated Hymen. By B. Burwell, M. D. [Communicated in a letter to Dr. Dewees.]—On the 11th June, 1822, I visited Miss S. S———, aged nearly fifteen years. She had slight fever, furred tongue, some thirst, loss of appetite, pain in the head, and pain in the back resembling precisely that of labour, and frequent desire to void the urine. The labia were swollen, and together with the perineum were somewhat protruded and tender to the touch; the hymen was resting within the labia, *imperforated*, semi-pellucid in the centre, but more vascular around its edges; a fluctuation of the contained fluid could be felt. It was almost a year since every symptom of menstruation had been regularly established in the system, but no discharge had ever taken place. Excepting at the menstrual periods the general health had been tolerably good. A small tumour, probably the distended uterus, could be felt above the os pubis.

I punctured the hymen with a lancet, and drew fourteen ounces of dark, thick, uncoagulable blood from the vagina, and in the twenty-four hours following the operation, she discharged about the same quantity of still darker appearance and of greater consistence or tenacity. After this, the discharge gradually became natural.

Complaining of considerable debility, a few mild tonics in wine were taken—the patient soon recovered her health, and has ever since menstruated without the least difficulty.

The blood flowed in a considerable stream, and was received into an oval dish, carefully weighed, and then put at rest, so as to afford every opportunity for coagulation. It was preserved for twenty-four hours, and, although the weather was very warm, not the least appearance of coagulation or of putrefaction was perceptible.

Case of Premature discharge of the Liquor Amnii. By John H. Kain, M. D. [Communicated in a letter to Dr. Dewees.]—Mrs. R. a lady of a very delicate frame, who had borne several children, but miscarried with the last about the seventh month of pregnancy, sent for me in the night of the 31st of December, 1827. She was in the sixth month of pregnancy. The day previous she had complaned of distressing cardialgia. When I arrived, she had pretty severe alternate bearing-down pains: some subsidence of the abdomen had taken place, and there was a considerable gush of liquor amnii with each pain. The motion of the fœtus was perceptible. She had no difficulty of discharging her urine, which was likewise subject to the voluntary powers. The discharge from the vagina was not coloured. The pulse small, hard, and quick.

I bled her, and directed an anodyne enema. The next morning I found her much easier. There was still some discharge from the vagina, attended with slight pains, a hard, quick pulse, sick stomach, and furred tongue. She was again bled a few ounces, and took a tea-spoonful of calcined magnesia, and the same quantity of Epsom salts. Quietude and a horizontal posture were enjoined. The salts and magnesia operated gently, and the next day I found her much better.

She had a return of the same symptoms, with discharge of the liquor amnii, on the thirteenth of January, the eighth and twenty-fifth of February, and eighteenth of March. The same treatment was pursued with a similar result.

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* Vol. I, p. 497, of this Journal.

On the 28th of March, after a very quick labour, the child was born alive, but lived only about half an hour. There were a number of hard, yellow tumours on the placenta; and the palms of the infant's hands and the soles of its feet were vesicated; whilst the other parts of the hands and feet were lived, resembling nævi materni.

The labour was premature, though two weeks more would, perhaps, have completed the term of gestation. The child had great difficulty of respiration, and died in convulsions.

Exsection of the Clavicle.—Professor Mott, of New York, has recently performed this daring operation with success in a case of osteo-sarcoma. The disease first began to show itself in February last, and by the month of June had increased so much that the tumour of the clavicle was as large as an ordinary fist, and from its superior surface, which was ulcerated, hæmorrhage frequently occurred. Although the patient was otherwise healthy, the excessive irritation caused by the disease, together with the frequent loss of blood, must soon have destroyed his life.

The disease was so extensive, and involved such important parts, that apprehensions were justly entertained that the operation could not be advantageously attempted. The probability of finding the great subclavian vein involved in the spongy bony mass, the necessity of a very extensive dissection, and also of proceeding with extreme caution, in order to avoid injuring the thoracic duct, together with the possibility of much loss of blood, and the certain infliction of very considerable pain, were all made known to the patient and his friends. The patient, however, had resolved to submit to an operation, and was desirous of having it performed without delay.

Dr. Mott began by an incision opposite to the sternal extremity of the fourth rib, and extending semicircularly upwards, to within two inches of the thyroid cartilage. He next cut from above the acromion process towards the sterno-cleido-mastoideus, to meet the extremity of the anterior incision. The external jugular vein was tied and divided. The sternal articulation of the clavicle was next cut loose, and the dissection continued outwards until the rhomboid ligament was separated. The clavicular head of the sterno-cleido-mastoideus was carefully detached, and now the whole of the dreadful tumour was brought into view. The irritation produced by this spongy bleeding mass had caused all the vessels of the surrounding parts to be greatly enlarged, and rendered it necessary to tie a great number. Every cut affecting the tumour immediately obscured the succeeding part of the operation by free oozing of blood, and every movement approximating the subclavian vessels demanded the utmost caution. The patient with great fortitude sustained the operation, which, from the circumstances above-mentioned, was protracted for nearly four hours. In separating the tumour from the subclavian vein throughout its course, and from the thoracic duct, the operator necessarily experienced the greatest difficulty, having to wait for each diminution of the vein caused by inspiration, in order to make use of the knife. The vein was partially imbedded in the spongy mass, and was entirely denuded for some inches when the operation was accomplished, by dividing the scapular portion of the clavicle opposite to the origin of the conoid ligament. About thirty vessels were tied during the operation. As the integuments were ulcerated and destroyed for some extent over the tumour, it was impossible to save a sufficiency to cover the wound, which was filled up with lint, and the patient put to bed.

On the sixth day evidences of granulation were seen; the patient continued rapidly to improve, and we have reason to believe is at this time quite recovered.

In conversation with Dr. Mott, thirteen days after the operation, he informed us, that every thing promised a most happy conclusion to this severe dissection. Dr. Mott stated, that of all the operations he ever performed, this was the most difficult and appalling in appearance; and so arduous was the task of separating the diseased clavicle from the important vessels beneath, that he was once almost inclined to doubt the possibility of accomplishing his purpose. By persevering with extreme caution and patience, he enjoyed at last the satisfaction of complete success, in which every philanthropic mind must sincerely sympathise.

The history and details of this interesting case will be given by our distinguished collaborator in a succeeding number of this Journal. G.

On the Quarantine Regulations of Boston. By E. Hale, M. D. Jr. [Communicated in a letter to the Editors.]—The author of the review on "Quarantine Regulations of the United States," in the first number of the American Journal of the Medical Sciences, appears to have misapprehended the design of the ordinance establishing quarantine in Boston. Having made an extract from that ordinance, so as to include its provisions with the quarantine regulations of other cities, he remarks of them, that "it will be seen that they are all founded on the assumption of yellow fever being contagious, or capable of being imported in a developed form." The reviewer is indeed aware and takes notice of the fact, that the powers given by the Boston ordinance to the health officers, render it capable of being used to a very different purpose. But he does not seem to have been aware, and as a stranger he could not well have been, that this ordinance was passed with the express design of doing away, and that in practice it has done away, the whole of the old system of quarantine, so far as it had respect to the supposed contagious character of yellow fever.

Such is in reality the case. For although all vessels arriving at Boston, between the fifteenth of June and the fifteenth of September, from the West Indies, or from the Mediterranean, or from between the tropics, except from beyond the Capes, or from any other place where an infectious disease prevails, are required to perform quarantine, yet the quarantine required of them, is nothing more than to submit to a thorough examination, and, if necessary, purification of the vessel and cargo. It has no respect whatever to the length of time the vessel may have been out, or to any of the other questions and restrictions which have arisen from the apprehension of contagion.

It may not be of much importance to correct the misapprehension into which the reviewer has very naturally fallen. The correction does not, by any means, weaken the force of his remarks in favour of a better system of quarantine regulations than those which are generally established, not only in this country, but in every other in which they are established at all. On the contrary, it greatly supports them; and it is on this account, chiefly, that I am induced to recal this subject to your notice, inasmuch as the Boston regulations afford one of the earliest examples of a quarantine system founded entirely on a correct theory of the diseases against the introduction of which it is chiefly designed to provide. This does not, it is true, very distinctly appear in the ordinance itself. It might be difficult to define in all cases by law how far the quarantine ought to extend. There are still some diseases universally acknowledged to be contagious, (small-pox for example,) which it is necessary to guard against. There are others, as the plague, whose character in this respect is less settled. It was therefore desirable that the powers given by the law to the health officers should be of the most general nature. The practice under the law, in reference to yellow fever, as I have already observed, is wholly founded upon the well-established principle that it is not a contagious disease.

It is also worthy of notice that the change which has been effected in our quarantine system, is wholly the result of a corrected state of public opinion, produced by a free discussion of the subject in our literary journals and newspapers. In 1819, so entirely was the system founded upon the belief of contagion, that the ship Ten Brothers, to which much of the fever of that year was traced, went through her full course of quarantine without the slightest examination of her condition. Her hatches were not even opened until she was discharged from quarantine and arrived at the wharf; and then she was found to be in so foul a condition, that nearly every person who went on board her, sickened and died. The discussion of the question of contagion, was soon after begun in the North American Review, and continued in the public papers, until almost the whole community were convinced that the disease was not contagious; and that the system of preventive measures which had so long existed, founded upon the supposition of contagion, was not only burdensome to commerce, but inefficient, deceptive and dangerous. Still the board of health was not in any degree convinced. At the new organization of the city, the powers of the board of health were transferred to the city council; but the council had by their own act, for a time continued the former board in power. But it now became necessary to abolish that board, and all its powers, in respect to quarantine, were transferred to the health physician, under the direction of, and subject to an appeal to, the mayor and aldermen. Perhaps no city has a more efficient, or a less onerous system of health regulations, than ours under the present arrangement.

On Expansibility as a Vital Property, and on the Influence of the Capillary Tissue over the Circulation of the Blood. By HUGH L. HODGE, M. D.—(*North American Medical and Surgical Journal, June*, 1828.)—The intention of the writer of this paper is to establish, in opposition to the views of Vacca, Allen, Lubock, Philip, and Hastings, that the capillaries, in inflammation, are in a state of increased, and not of diminished action.

The paper commences with an attempt to determine the meaning of the term "action of a capillary vessel," as being the point on which the whole discussion turns. It is not contraction, as is asserted by Dr. Philip and his school. Mr. Hunter affirmed differently, and other writers use the "word action metaphorically, to express the state or function of a vessel, a tissue, or an organ." The conclusion, therefore, is, "that the action of a capillary vessel implies the manifestation of its vital properties." This definition does not appear to be happy. We are aware how difficult it is to avoid obscurity in the explanation of points so profound and recondite, and the mode in which this definition is obtained, is not calculated, in our opinion, to arrive at a safe and perspicuous deduction. In physiology principles can only be established by a close analysis, and rigid examination of the phenomena manifested in organized or living structure, and not by the dicta or opinions of writers, however respectable their names or weighty their authority. As a consequence of this definition, "increased action" is the manifestation of such properties in an exalted degree. According to Dr. Hodge then, inflammation is exaggeration of the vital properties.

This definition of inflammation, though much less definite, is very analogous to that of M. Broussais, and his school, who regard it as an exaltation or exaggeration of the organic movements disturbing the harmony of the functions, or disorganizing the tissue where it occurs.

"The pathological question" or inflammation, the doctor then proceeds to affirm, "is reduced to a physiological inquiry as to the vital properties of capillaries; as to the modes in which their powers are displayed; and finally, as to the consequences of the manifestations of their vital properties."

The ingenious author of the essay has not entered into an investigation of what is to be understood by "vital properties." It is to be apprehended that this term is often employed in a very loose manner, and that some of his readers may attach a meaning to it very different from his own, and thus be unable fully to appreciate the force of his remarks.

Contractility, it is assumed, is a vital property admitted by all physiologists, in consequence of which capillaries contract on the application of certain stimuli, and expel their contents. This position is probably too general and unlimited. Darwin, whose views on the capillary system are profound, and worthy of respectful attention, does not attribute to them this property, and the disappearance of their contents from the application of certain stimuli, he explains by venous absorption, (Zoonomia, Sect. xxvii. I.) This property is adopted by the writer of the paper, but he contends one of the principal objects he has in view in its publication, is to show "that capillaries have a vital property of expansibility; that they dilate under the influence of certain stimuli; and draw blood into their cavities from the supplying arteries."

The vital properties of the capillaries, it would appear from this exposition of Dr. Hodge, are contractility and expansibility. From the definition previously given, capillary action must then consist in contraction and expansion; and inflammation or the pathological action of the capillaries, the more rapid, or more forcible contraction and expansion of the capillaries.

That contraction and expansion are active states in the capillaries, is by no means established. The circumstances supposed to exhibit these states, and the effects attributed to them, admit of other modes of explanation. Positive experiments give a strong probability that they are accomplished by other means. Capillary circulation exists in bones of the closest texture and the densest woody fibres of plants, yet it can scarcely be contended that it is in them accomplished by the agency of contraction and expansion. Dutrochet has shown that capillary action may occur without contraction or expansion, both in vegetable and animal structure.

Contractility is a bad phrase. It was introduced by Bichat as a substitute for irritability, and he was led to adopt it, from falling into the error of the great Swiss physiologist, who regarded contraction as the test of irritability. Contraction is a function of muscular fibre, as sensibility is of nervous structure; it is not therefore a vital property. Hence Bichat was compelled to admit an insensible contractility—a contraction where no contraction could be proved.

Admitting, then, that expansion does occur in the capillary tissue, it is not an evidence of the existence of a vital property. Secretion is an action of capillary vessels, and is manifested on the application of certain stimuli, yet no one would make it depend on a peculiar vital property, and suppose the explanation of this vital phenomenon was approached by referring it to secretibility as a vital property. Nutrition is an action of the capillaries, and secretion and nutrition are in reality the most striking and important results of the actions of capillaries, but who will assert that nutrition is an evidence of a specific vital property to be called nutritility.

No advantage, it seems to us, is gained in science, by the multiplication of ultimate principles, and they should be admitted only on the most rigid demonstration. In the progress of sound philosophy and accurate knowledge, they are reduced in number and simplified in character.

The facts, which after all are of the most importance, adduced by the author as the proofs of expansibility as a vital property, are unquestionable. That an increased afflux of fluids takes place into capillaries, under the excitement of irritants and stimuli, is one of the earliest of the recorded axioms of medical science. Their turgescence and congestion, produced in this manner is admitted by every one, though the mode in which this afflux is effected, and expansion occasioned, allows of different explanations.

The idea of expansibility as a vital property, the author believes is expressed by Bordieu, in the erection of the glandular and absorbent systems that writer supposes to be requisite to their functions; in the rather vague phrases, "power of dilatation" and "action of dilatation," of John Hunter; and in the acknowledgment of an erectile tissue, by "some French and other continental pathologists," (physiologists.) He might have added also, quite as strongly, in the "erection vitale" of Broussais, the first element of the physiological pathology of the French reformer. It is, however, the fashion to decry and to neglect the name of Broussais, rather than to render justice to one who has accomplished so much that is beneficial and honourable to the science.

Expansibility was proposed originally as a vital property by V. Prus in 1825. His arguments on this point we believe were completely refuted in the Journal Universel and Annales de Physiologie. The views of this writer in that respect, have, notwithstanding, been adopted by Dr. Hodge, whose favourable opinion gives them more weight than we were at first inclined to attribute to them.

Though Prus attributes to expansibility the afflux of fluids to irritated parts, he does not expressly assign "to the capillaries any active influence over the general circulation." The writer of the paper appears to consider such an influence as unknown to the author of the essay, De l'Irritation et de la Phlegmasie, and that its annunciation by Professor Smith, of Yale College, in the Philadelphia Monthly Journal, for 1827, by Professor Schultz, of Berlin, and himself, in his lectures, are the first and only notices of this doctrine. That Prus was not more explicit on this subject, is to be ascribed to the little novelty it would have possessed with his readers in France, where this doctrine is generally entertained, and taught in all the schools.

The independence of the capillary circulation on the impulsion of the heart, was first taught as early as Stahl and Van Helmont. Bordeu also separated the capillary circulation from the general circulation, and this doctrine was cogently and beautifully illustrated by Bichat, in his Anatomie Générale. In the Zoonomia of Darwin, the adequateness of the capillaries to their own circulation is clearly shown and enforced, (Section xxiii.) Broussais, who is hardly deemed worthy of notice, in 1811, published in the Memoires de la Société Médicale d'Emulation, a paper containing a theory of the liver, spleen, and lymphatic glands, based on this already established doctrine. It is at this point, as he remarks, where he commences. "Il est le point précis où la science est arrivée; c'est aussi de la que je veux partir." In the following passage the entire independence of the capillary circulation is expressed in the clearest terms. "Le cœur n'a donc, avec le système capillaire d'autre rapport que de mettre continuellement à sa portée le sang dont il peut avoir besoin: ensuite ce système en dispose à son gré, sans que le plus ou le moins de promptitude qu'il met a s'en emparer, et les directions variées qu'il lui imprime, exercent ancune influence directe sur cet organ." He afterwards remarks, "ces vaisseaux, (capillaries,) sont, *ut ita dicam,* le cœur des veines," and attributes the venous circulation chiefly to the impulsion given to the blood in the capillaries.

Adelon in his Physiologie de l'Homme, when treating on the function of the circulation, teaches this doctrine in the fullest manner. He observes, "il est difficile, en effect, de nier cet appel du sang dans les systèmes capillaires, en raison de leur excitation; on l'a observé directment dans les expériences microscopiques." And immediately after, he continues, "De là même, résulte que c'est réelement cette *action aspirante* des systèmes capillaires, qui règle la quantité de sang qui traverse les trois autres parties de l'appareil circulatoire." In what this action consists, Adelon does not pretend to determine, but he rejects precisely the theory announced by the author of the essay under consideration. "Du reste, cette *action d'aspiration* exercée par les systèmes capillaires, ne peut nullement être determinée; on l'a dite une succession de contractions et de *dilatations actives,* mais ce n'est là qu'une conjecture; cette action etant tout-à-fait moléculaire, on ne peut rien savoir d'elle, sinon que les systèmes capillaires ne sont pas passifs pour sa production, et qu'elle n'est ni physique ni chimique, mais organique et vitale."

These quotations are sufficient to show, others could be cited, that the perfect independence of the capillary circulation, and the active influence it exercises over the general circulation, are doctrines long since promulgated and generally entertained by the physiologists and pathologists of France.

We are rejoiced that Dr. Hodge has brought this subject before the American profession, and has so ably sustained it against the unphilosophical and crude science of the English physiologists, the worst in the world. The capillary circulation cannot too much engage the attention, and occupy the profound reflection of practitioners. No one can understand the pathological condition who has not mastered this fact of physiology; and on it reposes the employment of most of our therapeutic means.

The views of the writer on expansibility and the capillary circulation, are presented in four propositions, under each of which is adduced the facts he supposes to countenance his doctrines. Much research and no inconsiderable ingenuity is displayed, in collecting and applying a great variety of observations in support of the different points of the argument. While many of these are apposite, we must confess others are equivocal, admit of other explanations equally plausible, and cannot therefore be relied on as positive evidence. In all controverted subjects, facts that equally admit of different explanations and may be cited by both parties, however numerous they may be, give but a feeble support, and should be sparingly used. A single fact that will admit but one explanation, is of more weight than a thousand that will bear various solutions.

Under the second proposition, which is intended to demonstrate expansibility as a vital property, a number of questionable circumstances are introduced and relied on, few of which will be admitted, and nearly all contested, as having the bearing attributed to them by the writer of the essay. It is not, for instance, shown that absorbent vessels have open or patulous orifices. Fohman on the contrary, expressly asserts, that in fishes he has been able to demonstrate they commence in closed extremities or cul-de-sacs. In like manner, no evidence can be adduced to prove that in seeds, and the radicles of vegetable roots, absorption is by open orifices. In the roots of plants, Dutrochet most positively assures us, that no such arrangement exists, but that absorption and capillary circulation are accomplished by vesicular corpuscules.

We cannot but think this part of his subject exhibits too little of the spirit of physiological reasoning. Expansion is considered in too mechanical a view. Simple expansion could produce none of the effects attributed to it—something more is requisite; and this the essential principle, without which expansion would be fruitless. The afflux of fluids, in many of the instances cited, cannot be attributed to the enlargement or expansion of vessels, but the cause that occasions the expansion, is that which determines the flow of the fluids. It is better, instead of deceiving ourselves by an inadequate explanation, to acknowledge with Adelon our ignorance of this mystery of nature, and be contented with a simple statement, that the capillaries are not passive in its production, and that the action is organic and vital.

The last proposition is an attempt to show that, "during inflammation, an increased quantity of blood flows through the affected part."

This proposition is not a necessary consequence of the preceding, and the proofs brought in support of it, are far from conclusive. They are all compatible with a contrary doctrine, and which may be sustained by direct and positive evidence.

In giving this statement of the leading principles of Dr. Hodge's essay, we have freely expressed some of the objections that arose in the mind on its perusal. We recommend it to the attention and examination of medical readers, who will find in it much valuable information, and useful materials for reflection. J.

Operation for a formidable Tumour in the Neck.—"The patient, Mr. ——, is a man of 60, rather weak in constitution.

"Tumour has been growing between one and two years. Externally, it extends from the lower jaw to the inferior part of the neck, on the left side; and from the trachea across the neck, under the mastoid muscle to the transverse processes of the cervical vertebræ. Is of an almost stony hardness at the upper part. In form somewhat flattened, as if compressed.

"On the inside of the mouth a tumour is seen on the left side of the fauces, extending half across this passage, and rendering the deglutition very difficult.

"A consultation being held of the physicians of the hospital, aided by other gentlemen, it was concluded that as the patient must expire without an operation, if, considering he might die in its performance, or soon after, he thought it best to have the operation done, it would be proper to do it.

"The patient having duly considered the dangers of his case, and having consulted his friends, was anxious to have an operation done as speedily as possible. It was accordingly performed by Dr. Warren as follows.

"The neck being shaved, and the patient, having taken sixty drops of laudanum half an hour before the operation, was placed in a common chair, the head inclined to the right side, and an assistant directed to support it sufficiently to prevent any contraction of the muscles of the neck.

"An incision was made from the ear to the clavicle, inclining forwards from the ear towards the larynx, so as to uncover the middle of the surface of the tumour. This part of it was then dissected and brought into view, so as to expose the more prominent portion, which was separated from the lower jaw and the ear above, from the larynx before; and the mastoid muscle was turned back from the upper portion of the tumour, care being taken to avoid the accessory nerve where it enters the muscle.

"About this period the patient fainted twice in succession, but by inclining the head downward, he was recovered.

"The next object was to disengage the tumour at its lowest part, and ascertain its relation to the great blood-vessels and nerves. In prosecuting this part of the operation, it soon appeared that the disease extended so low as to leave a small space between it and the clavicle. While cautiously attempting to raise the lower part of the tumour, and looking for the internal jugular vein, this vessel was found to be pushed forwards by the tumour, and bent from its course, and to be covered anteriorly by a thin layer of the tumour, which obscured its usual blue colour, and confused it with the surrounding parts.

"The deep dissection of the tumour was prosecuted at the superior part of the neck. The numerous large arteries from the external carotid being situated here, it was necessary to prevent the hæmorrhage from these vessels, by placing a ligature upon the carotid artery at the lower part of the neck. For this purpose the sternal attachment of the mastoid muscle was cut. Then by dissecting the sterno-hyoideus and dividing the omo-hyoideus, which was thin and wasted from passing through the tumour, the artery was exposed, its sheath opened and dissected, and a ligature of three threads passed around it and tied. The patient expressed no emotion at the ligature of the artery, nor did he appear inclined to faint again.

"Passing a ligature through the tumour it was drawn backwards, and thus the dissection was continued high and deep to the side of the pharynx. In doing this, a considerable nerve, apparently the glosso-pharyngeal, was unavoidably divided. The tumour being somewhat loosened, a cord was seen proceeding out of it towards the upper part of the neck, appearing to be a part of the tumour. This proved to be the par vagum nerve and the carotid artery. The entire extirpation of this part of the tumour was impracticable, except by a dissection, which the patient would not have supported. The tumour was therefore removed in separate portions:—first, the most considerable mass of it, afterwards the other portions, so as to leave a small part only attached to the vessels and nerves; this was in great part broken and detached by the fingers. In performing this part of the operation, it was perceived that when the tumour was so moved as to draw the par vagum, (which necessarily happened in a slight degree,) at that moment the patient had a sort of spasm or convulsion, extending from the neck into the thorax, and trunk of the body.

"In the dissection of the upper part of the tumour, the thyroid vein was necessarily cut off, and produced a bleeding which was troublesome while it lasted. This was the principal hæmorrhage. Except at the beginning of the operation, there was scarcely a show of arterial blood. The skin was brought together to allow such parts, as might be disposed, to unite, in order to lessen the extent of the wound.

"The first night he had some sleep. On the next day, pulse 120—no difficulty in swallowing, breathing, nor speaking. Second day; much the same. Third day; says he feels comfortable—speaks with ease—swallows better—has no difficulty in breathing, nor any other alarming symptoms—pulse 100. Took half an ounce of sulphate of magnesia, which was repeated in the afternoon.

"Fourth day. Wound dressed; has in a great measure healed—pulse 100—has a disposition for nourishment, and swallows well. From this time he recovered rapidly.

"The tumour on the inside of the throat inflamed soon after the operation, and had great appearance of sloughing away. But this appearance subsiding, in sixteen days from the first operation the actual cautery was applied. A piece of horn was so shaped as to receive and convey securely an iron across the mouth to the throat. This being introduced, a globe of iron, half an inch in diameter, with a handle attached to it, was heated red hot and carried to the tumour, and pressed forcibly into it. The substance appearing very hard, a second red hot iron was employed in the same manner.

"On that day and the next, the patient suffered considerably from this operation. By the fourth day he was as well as before it; and the slough having separated, he left the hospital within a week, and went home into the country.

"From some exposure, he got an inflammation of the throat, which for a time had an unpromising aspect; but from this he has now recovered, and is well enough to resume his common occupation.

"A surgeon who undertakes an operation on a deep-seated tumour, should be prepared to find great deviations from the natural state of parts; and he must not expect his knowledge of anatomy to serve as his sure and infallible guide in this new state of things. A deliberate observation of parts, as they present themselves, can alone conduct him safely along.

"The recovery of this patient shows what extraordinary wounds a weak, yet unirritable constitution can support. In this operation, which lasted an hour, including the faintings, the carotid artery was tied; the par vagum nerve and the internal jugular vein dissected, for a considerable extent; the accessory and sublingual nerves exposed; the glosso-pharyngeal and the descending branch of the sublingual, *(hypoglossal?)* or descendens noni, cut off; part of the pharynx and trachea uncovered; the mastoid muscle dissected for its whole length and divided; the omo-hyoid, sterno-hyoid and sterno-thyroid dissected, and the first divided; the digastric and internal pterygoid and other small muscles dissected; and the transverse processes of the cervical vertebræ in part exposed."—*Boston Medical and Surgical Journal, Vol. I. No. II.*

Injuries of the Head.—The first number of the Transylvania Journal of Medicine, and the Associate Sciences, contains a highly interesting paper by Professor Dudley, on this subject. The experience of Professor D. has induced him to depart from the commonly received principles by which surgeons are governed in regard to the use of the trephine. "In skilful hands," he says, "the operation beyond the atmosphere of large cities, is neither dangerous in its consequences, nor difficult in the execution."

It is well known that Mr. Cline cured two cases of epilepsy caused by injury of the head, by the use of the trephine, and Professor D. adduces as further evidence of the efficacy of the operation, three cases in which it was successfully performed by himself.

Case I. Mr. K. a carpenter, consulted Dr. D. in September, 1818, "on account of a severe pain in the superior and posterior part of the cranium which had afflicted him for nine months. A succession of tumours had at various periods appeared about the seat of the pain. Upon an examination, in place of tumours, two very sensible depressions were discovered on the surface of the scull, attended by extraordinary sensibility in the integuments of the parts. About Christmas all the symptoms became aggravated and severe epileptic convulsions ensued. His convulsions were so frequent and violent in the latter part of winter that it was apprehended he would speedily fall a victim to his disease." During the months of February, March, and the beginning of April, he was constantly confined with a severe affection of his head, attended by violent epileptic fits every five or six days.

"The trephine was used on the 16th day of April, two circular pieces of bone being removed, corresponding with and including those portions which by previous examination seemed to be depressed. The pericranium was remarkably thickened and morbidly sensitive. The bone was porous, and admitted of large processes of this membrane, and of blood-vessels to pass directly to the dura mater. The bone removed by means of the trephine was immediately in the direction of the longitudinal sinus, while there was great difficulty in breaking up the connexions between it and the dura mater. After the operation was completed, I was astonished on turning my attention to the dura mater, to discover a copious secretion of fluid which separated that membrane from the surface of the brain more than half an inch; while that organ in place of giving to the finger a sense of pulsation, felt as hard and as unyielding as a board. The patient being dressed in the usual way, was put to bed and kept quiet till the fifth day, when from the establishment of free suppuration the bandages were removed. It was now ascertained on examination, that the fluid beneath the dura mater was absorbed. The brain had regained its proper level and pulsated with unusual vigour: no convulsion had occurred since the operation. The dressings being renewed, he was ordered a mercurial course of treatment with a view to correct the secretions and to promote the healthy action of the absorbents. At the expiration of three months he was perfectly restored to health, having experienced only two slight attacks of epilepsy during his recovery, while his head, which had for many months given him excessive pain, caused but little inconvenience after the operation. From an occasional intercourse with this patient for many months after all professional attendance and advice were suspended, I am prepared to pronounce on the cure as radical."

Case II. W. T. a young gentleman from South Carolina, æt. twenty-one, when five years of age "received a blow accidentally on the superior and middle portion of the left parietal bone. Being at school, he was able to go home on foot without giving any particular manifestations calculated to excite alarm. On the ninth day he became suddenly apoplectic, and paralysis of one side ensued. The paralytic affection gradually disappeared, so as to leave him in the enjoyment of his faculties, as well corporeal as intellectual, at the expiration of two months; but from that period he became the subject of severe pain in his head, and especially about the seat of the injury he had previously sustained. From this time his constitution became exceedingly delicate and excitable, with disinclination for exercise, and liability to faintness after the slightest exertions: finally about his fourteenth year, nine years after the reception of the injury, he became the subject of epileptic convulsions. These had ever since continued to recur at irregular intervals of two, three, or four weeks, varying with the occasional causes which for a time invited or retarded their appearance. He had been but a short time the subject of epilepsy, until a most manifest improvement in his constitution took place. His personal appearance and constitutional vigour being much changed for the better, his former excitable habit, with his liability to faint after every slight exertion, now left him. But these flattering symptoms were soon followed by a perceptible injury of his intellect, insomuch that it became useless to confine him longer to his studies in school.

"After receiving this history of the situation of the patient from the mother, upon turning to himself with a view to additional information, I observed a stammer in every attempt an enunciation; while his memory had become so entirely treacherous, that he could no longer recite with any degree of accuracy, an event which had transpired within two days, his recollection being good, however, in relation to circumstances of his childhood. For most particulars in relation to his daily history, even in reference to the operation of a dose of medicine, it was necessary to consult his mother.

"A cicatrix on the side of the scalp pointed out the seat of the original injury. Under all these discouraging circumstances, after a few days preparation, the operation was resorted to on the 10th of May, 1825, to relieve him of an injury, the consequences of which had been accumulating upon him for sixteen years. A small depression of bone appearing manifest, corresponding with the original site of the injury, indicated the point upon which to apply the trephine. The crown of the instrument was made to embrace the depressed bone, which, when removed, presented a process projecting from its inner surface about one inch in length, of the size of a small quill at its base, the extremity tipped with soft cartilage. This spiculum of bone had penetrated the dura mater, and communicated with a large preternatural sinus, from whence issued a stream of blood as thick as a man's little finger, which continued to flow from the instant the bone was removed, until from the quantity lost, it was judged proper to check it by means of pressure. The dura mater was diseased, presenting a dark blue appearance over a space nearly as large as the opening in the cranium made by the trephine; while the sinus beneath appeared to be, from an examination made by the little finger, more than an inch in depth, and of equal width. The disposition to hæmorrhage was checked in a few minutes by means of pressure with the thumb, and being now satisfied that the trephine was not further necessary, it was proposed to cleanse and dress the wound. Before the dressings were applied, an alarming convulsion came on, during the continuance of which, a stream of blood issued through the opening of the dura mater, that projected three or four feet. A second and third convulsion ensued, with like discharges of blood from the opening of the dura mater, before the patient could be placed in bed. For six or eight hours after the operation, he remained in an insensible state, and then his natural feelings and reason returned.

"It was now supposed, whatever might be the termination of the case, the cause originally productive of the disease was removed. From bloody water, the discharge from the wound changed in the course of twelve hours to a colourless serum, and for three days and nights in succession, it was so copious as to make it necessary to change towels, pillows, bolsters and sheets, two or three times during the day. Those young gentlemen who assisted in dressing and attending to the case, insisted that the entire amount of serum discharged, could not be less than two gallons. On the morning of the fourth day the dressings were dry, and in some few hours after, suppuration became manifest. The wound was now dressed with adhesive plaster, which was renewed daily for about thirty days, when it was healed.

"The patient had no convulsion after the day on which the operation was performed; a manifest improvement in his memory became perceptible in a few days to all around him. His stammer, which appeared to proceed from an indistinct recollection of things, very suddenly vanished, his eye which had been half closed, heavy, and inanimate, was now sprightly and intelligent. In ten days he left his room, and at the end of six weeks he returned home in the enjoyment of perfect health; travelling a distance of five hundred miles in the month of July, in ten or twelve days."

Case III. A young man, æt. twenty-three, when five years old "received a kick from a horse, which fractured and depressed a portion of the right parietal bone. The immediate symptoms were not particularly alarming, notwithstanding a wound also in the scalp, nor was there any extraordinary defect either in general health or constitutional development, until about the fifteenth year of his age, when, without any assignable cause, he had for the first time an epileptic convulsion.

"From that time he continued to be the subject of epilepsy every second, third, and sometimes fourth week, according as the exciting causes acted with more or less intensity. The continuance of epilepsy for eight years, had reduced his constitutional vigour, and rendered his system morbidly excitable. The condition of his mind was still more deplorable, his memory having undergone almost a total extinction. In the latter part of February, 1826, after spending a few days in preparing the system, the operation was performed in the amphitheatre, in the presence of all the class.

"The external incision being made, the trephine was applied in such a manner as to cover the larger portion of the depressed bone. In two or three turns of the instrument, the cranium was penetrated in one point of the circle; and through this opening, which could have been closed with the small end of a surgeon's probe, transparent colourless serum flowed during the balance of the operation.

"The circular piece of bone being removed, the dura mater was found defective to the extent of a twelve-and-a-half cent piece of silver, which exposed a sinus reaching down to the petrous bone, near the base of the scull. A spinous process projected from the inner table of the bone about half an inch long, its base being of equal dimensions. A small portion of the spinous process was not included by the trephine; this was removed by means of a strong pair of forceps. The sinus in which the serum was collected, was large enough to receive a hen's egg. The patient had two light attacks of epilepsy on the second and third days after the operation; but on the fourth, suppuration was established, the dressings were renewed, aud he began to give assurances of a successful issue by a more sprightly and animated countenance. Each successive dressing was accompanied by new evidences of intellectual and corporeal improvement; and at the end of the fourth week, the wound having cicatrised, the patient returned home in the enjoyment of perfect health."

In using the trephine for the cure of certain forms of epilepsy, Dr. D. very justly observes, it becomes a subject of particular interest to be prepared to designate those cases in which the operation is demanded with a view to cure, from others which, notwithstanding epilepsy supervenes upon morbid ossification pressing upon the brain, are yet beyond the reach of all surgical skill. The use of the trephine, he says, could not be justified, except in cases of evident depression of bone, or of a morbid condition of it produced by violence or other causes, leaving thereby but little doubt in regard to the place upon which to use the instruments as well as the practicability of removing the causes productive of morbid cerebral excitement.

It is well known that a difference of opinion exists between the surgeons of England and France, respecting the propriety of healing certain wounds by the first intention. In England and this country it is a general rule to attempt the union of wounds by the first intention; Dr. D. thinks, however, that it is yet to be decided, whether wounds of the scalp, accompanied by an injury done the parts beneath the skin, do not constitute an exception in practice. The common integument being more vascular, and enjoying in a higher degree the power of restoration than those parts which it protects, frequently heals, while the parts over which it has united are still labouring under the consequences of the injury inflicted. Even where no unpleasant consequences in regard to a translation of morbid excitement to the dura mater ensues, it not unfrequently happens, says Dr. D. that the pericranium and bone become diseased, thereby producing a train of symptoms always alarming, and too frequently fatal.

"Numerous cases," says he, "are fresh in my recollection, and they occur every season, where chronic inflammation of the pericranium, with all its threatening train of evils, follows the union of the integuments by the first intention, in a contused wound on the scalp."

Dr. D. relates an interesting case of fungus cerebri, in which he used dry sponge bound as closely on the fungus as the feelings of the patient would permit, and found it the most effectual mode of applying gentle and regularly increasing pressure. To prevent the vessels from penetrating the sponge, a piece of fine linen or muslin should be interposed between it and the brain; as the sponge absorbs the secretions of the part, the pressure is regularly and insensibly increased, and Dr. D. has in five days by this means cured the fungus cerebri, and produced a sinus below the dura mater equal in magnitude to the fungus, without exciting unpleasant symptoms.

Hydrocele.—Professor Dudley of Transylvania University has given some interesting observations on this disease in the second number of the Transylvania Journal of Medicine. After remarking that in this apparently simple disease, its Protean character has given origin to much erroneous speculation as to the nature of the complaint and the most advisable mode of treatment, he details the differences between hydrocele and those maladies liable to be mistaken for it in a clear and perspicuous manner. Dr. Dudley claims the discovery of the encysted form of hydrocele which has lately been noticed by English writers. The first case he met was in 1818, since which time he has seen four others. These patients were cured by an exsection of the sac; in these cases the other modes of treatment would have proved unavailing. Grounded on his success he proposes a plan of treatment which he says is applicable to every variety of cases, is less painful, and more certain and speedy in its result. This is by a free incision through the scrotum and tunica vaginalis, thus giving the operator an opportunity of examining the condition of the testes, &c. and of removing viscid fluids, sacs, hydatids, or sarcomatous tumours. Where the fluid is contained in a preternatural sac, this must be exsected; but when the tunica vaginalis furnishes the secretion, precautions must be taken to prevent a return of the complaint. By means of proper dressings it is necessary, whilst all the middle and superior parts of the incision are placed in contact, to keep the lower part open by the introduction of a small tent one or two inches within the cavity of the tunica vaginalis; where coagulable lymph has been thrown out around it, so as to exclude it from the cavity, the disease is apt to return, in such a state of things the tent must be forcibly taken away, and the lymph broken down with a probe. The general dressings should be light and simple.

"Operations," says Dr. D. "upon tumours of the neck and breast, and upon the scrotum, are particularly apt to be followed by hæmorrhage, some little time after the dressings are applied. Partial pressure and the presence of extraneous bodies in wounds, have a peculiar effect in exciting a hæmorrhagic tendency in wounded vessels. On one occasion after removing a tumour from behind the angle of the jaw, which was attached to the transverse processes of the second and third vertebræ, I was near losing my patient by ineffectual pressure, made with a view to check a hæmorrhage that continued obstinately and alarmingly until that measure was abandoned. Immediately after pressure was removed, and the parts were cleansed of coagulated blood, the vessels contracted and the bleeding ceased.

"I have often remarked this hæmorrhagic disposition after operations upon the scrotum. In almost all cases the bleeding will immediately cease upon the removal of all compression; and I have met with instances wherein it became necessary even to take away the tents used in operations for hydrocele, before the bleeding could be checked.

"This principle in reference to hæmorrhage, is looked upon as a very important one in almost all cases wherein the loss of blood is involved. While complete pressure is decisive in its effects upon a bleeding vessel, imperfect compression excites and aggravates the disposition to bleed."

Rutgers Medical College, New York.—At a special meeting of the Rutgers Medical Faculty of Geneva College, held on Friday, the 23d of May, 1828, the following resolutions were unanimously agreed to, and the registrar ordered to transmit a copy of the same to Professor Godman.

A communication from Professor John D. Godman, addressed to the President of the Faculty, and tendering to the same the resignation of Dr. Godman as Professor of Anatomy and Physiology, was read; whereupon, on motion it was Resolved, That the continuance of Dr. John D. Godman's ill health, which has caused him to resign his Professorship, is deeply regretted by this Faculty, not only as a severe loss to the high standing of our Institution, but more especially for the lively interest we take in his personal welfare, who had been so long endeared to us by his social virtues, no less than by his intellectual and professional endowments.

Resolved, that the resignation of Dr. John D. Godman be accepted, and that the registrar furnish him with a copy of these proceedings.

A true copy.

JOHN W. FRANCIS, M. D. *Registrar.*

Philadelphia Medical Society.—The annual oration was delivered by John Bell, M. D. The subject chosen by the orator was the influence of medicine on the moral, intellectual and political relations of society, and in illustrating this he has displayed considerable industry and research.

We are happy to announce that C. W. Hufeland, Professor of Medicine in the University of Berlin, &c. E. Osann, Professor of Medicine and Surgery in the Military Academy, and J. F. C. Hecker, Professor of the Practice of Medicine in the University of Berlin, have been elected honorary members of the Society.

A Treatise on the Diseases of Females. By William P. Dewees, M. D. &c. &c.—Messrs. Carey, Lea & Carey have just published a new edition of this work, with numerous additions and corrections.

Treatise on Physiology applied to Pathology. By F. J. V. Broussais. Translated by John Bell, M. D. and R. La Roche, M. D.—Messrs. Carey, Lea & Carey have just published a new edition of this valuable work. This edition is enriched with notes by the translators, a preface, and a copious index.

Carpenter's Chemical Warehouse.—We are pleased to announce that Mr. G. W. Carpenter, who is advantageously known to our readers by his papers on pharmaceutical subjects, has opened a Drug and Chemical Warehouse, at No. 301, Market street, Philadelphia. He has connected with his establishment a laboratory for the manufacture of some of the most important articles, such as quinine, piperine, denarcotized opium, denarcotized laudanum, and acidulous tincture and extract of denarcotized opium, &c. &c.; and as these articles are manufactured by himself, or under his immediate superintendence, their quality may be depended upon.

MEDICAL DEPARTMENT OF THE COLUMBIAN COLLEGE.

To complete the organization of the Medical Department of the Columbian College, a chair, denominated *The Institutes of Medicine and Medical Jurisprudence,* has been established.

Professor Randall having been appointed to the newly created chair, the vacancy occasioned by his resignation of the professorship of chemistry, has been filled by Thomas P. Jones, M. D. formerly professor of chemistry and natural philosophy in William and Mary College, and late of the Franklin Institute. By these arrangements, the scientific advantages of the students are greatly augmented, without any material increase of expense, the graduation fee being reduced from thirty-five to twenty dollars.

During the last course of lectures, the professors occupied their new Medical College, erected during the past summer, and the result of the winter's experience proves that the building is well situated to the purposes for which it was designed.

It is large and commodious, consisting of three elevated stories, with a roof peculiarly constructed for the admission of light into all the apartments appropriated to anatomical purposes.

On the ground floor is the lecture room, laboratory, &c. of the professor of chemistry.

The second story contains the rooms, public and private, of the professors of the theory and practice of medicine and of materia medica, and of the institutes of medicine and medical jurisprudence.

In the third is the anatomical theatre, together with rooms occupied by the professors of anatomy, surgery, and obstetrics.

The theatre is designed from the most approved plans, and is conveniently connected with the rooms situated in the superior part of the building, which are intended for the purposes of practical anatomy. In relation to this particular department of the school, the professors have pleasure in saying, that care has been taken to provide space, light, and security, together with every other specific convenience that may afford to the student facility in prosecuting to advantage this necessary part of his collegiate studies. Rooms have, also, been set apart for a medical library and a museum of anatomical preparations.

Since the commencement of the last session, the professors have laid the foundation of a library. Already medical works to a considerable amount have been collected, and provision has been made for its regular and speedy increase.

The fifth session of the institution will commence on the first Monday in November next, and continue to the last of February. During this period, lectures will be delivered daily, and full courses will be given on the various branches of medicine, by

THOMAS SEWALL, M. D. *Professor of Anatomy and Physiology.*
JAMES M. STAUGHTON, M. D. *Professor of Surgery.*
THOMAS HENDERSON, M. D. *Professor of the Theory and Practice of Medicine.*
N. W. WORTHINGTON, M. D. *Professor of Materia Medica.*
FREDERICK MAY, M. D. *Professor of Obstetrics.*
RICHARD RANDALL, M. D. *Professor of the Institutes of Medicine and Medical Jurisprudence.*
THOMAS P. JONES, M. D. *Professor of Chemistry.*

The ticket of each professor is fifteen dollars; and all persons who have attended two full courses, in this school, are entitled to attend succeeding courses free of expense.

The requisites for graduation are similar to those required in the most respectable institutions in the country. The candidate shall have studied three years under the direction of some regular physician. He shall have attended each professor two full courses, or he shall have attended one full course in this school, and one in some other respectable medical institution. He shall have entered his name with the dean as a candidate for graduation, and delivered to him an inaugural dissertation on some medical subject, thirty days before the close of the session.

The degrees are conferred under the authority of the charter of the Columbian College, incorporated by the Congress of the United States.

R. RANDALL, M. D. *Dean.*

NECROLOGY.

It becomes our mournful office to announce the death of one of our most distinguished collaborators, **Wright Post, M. D.** The period at which this event took place is so recent that we have been able to obtain materials for the following brief notice only; we trust some one of his friends will give the public a biography of this eminent physician and surgeon.

Dr. Post was born in the city of New York, in 1765; he commenced the study of medicine under Dr. Richard Bailey, and continued with him until about the year 1784, when he went to Europe for the better prosecution of his studies; he selected the school of London, as affording the best opportunity of obtaining a knowledge of surgery, to which branch he intended particularly to devote himself. He returned to this country in the year 1787, and commenced the practice of physic and surgery. In the year 1791, the trustees of Columbia College having determined to organize a medical faculty, selected Dr. Post to fill the chair of surgery. In May, 1792, he proceeded to Europe, for the purpose of purchasing an anatomical museum, and returned in 1793. Immediately upon his return, Dr. Bailey, from considerations of health, proposed to exchange the anatomical chair, which he then filled, for that of surgery; this arrangement was effected, and Dr. Post became professor of anatomy; the duties of this branch he continued to perform until the year 1813, when the medical faculty of Columbian College having formed an union with the college of physicians and surgeons, Dr. J. Augustine Smith was associated with him as professor of anatomy and surgery; this connexion continued for a short time, when Dr. Smith's resignation left him again in the sole possession of the anatomical chair. He continued lecturing on anatomy until the impaired state of his health compelled him to resign in 1825. In 1817 he proceeded a third time to Europe, but on this occasion in quest of health; he left New York in the spring, and returned much benefited in the fall. He was early appointed one of the surgeons of the New York hospital, which appointment he retained until his resignation, when he was chosen consulting surgeon, which he held until his death.

The character of Dr. Post was not distinguished by any of those striking traits of genius or talent, which at once fixes upon the professor the attention of the public; he was never solicitous for an extended reputation abroad, and even neglected the opportunities which he possessed of obtaining celebrity at home; in confirmation of this remark, we may mention the fact, that he was the first who operated successfully on the subclavian artery above the clavicle, and yet the case was not published until many years afterwards, and then at the request of the Physico-Medical Society of New York, who published it in their first volume. His knowledge of disease was derived more from observation in a very extended practice, than from the perusal of books, and hence his opinion in difficult and dangerous cases was eagerly sought for. His devotion to his business was incessant, his attention to the sick committed to his care unremitted, the consequence was that he enjoyed in an eminent degree the confidence and esteem of his patients. He was universely respected by the members of his profession; as consulting physician he was sought for by all; this confidence he justly merited, from the strictly honourable manner in which he behaved whenever his assistance was required. He never allowed any temptation of private interest induce him to swerve from what was due to the attending physician and patient. His health naturally delicate, was much impaired by the arduous duties of his extensive business; he was subject for many winters to inflammatory attacks of the chest, brought on by the exercise of his lungs in public speaking; the frequency and violence of these attacks, induced him at last to relinquish all business, and to retire in the country, to procure what benefit might be derived from a change of air. As a public lecturer, Dr. Post enjoyed the esteem and respect of all his hearers, he made no attempt to engage attention by oratorical display, but he attained the same end more certainly by an uninterrupted display of what was practically important. In the unavoidable collision of professional opinion, he set an example of mildness and forbearance, but too seldom witnessed in our profession; he never thought it necessary to impugn the principles of those with whom he differed in opinion; he repressed by his example the tendency to personal observations, which are too frequently indulged in, when animadverting on the opinions and practices of others. His religious principles were deeply rooted, and even during the period when most extensively and arduously engaged in professional business, he seldom omitted an attendance on the public exercises of the church. We might with safety recommend to the profession in general the imitation of his life.

J. M. P.

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